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VICE-PRESIDENT TICKNOR: For the last session of the 1967 meeting, Dr. Howard Brown, Head of the Ornamental Horticulture Department, California Polytechnic College at San Luis Obispo, will be our moderator. We will have a session now on varieties and teaching. Howard, will you get the program underway?

MODERATOR BROWN: Our first speaker for this panel has been in the field of plant propagation and plant growing for many years. In fact he was telling me last night he taught his first class in plant propagation 46 years ago. He taught at Rutgers and received his doctorate from Columbia University. He came to Washington and was engaged in cranberry farming before he went into the nursery business. He now operates Clarke Nursery at Long Beach, Washington, and is a specialist in rhododendron production. His topic today is naming and registering plants. It is my pleasure to present Dr. J. H. Clarke:

NAMING AND REGISTERING PLANTS

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The naming of plants is not strictly a part of propagation but is closely allied with it. All plants we work with have names, or numbers, or identification tags of some kind.

Some of our members are plant breeders and perhaps they have the greatest responsibility in this matter of naming — responsibility to themselves and their own good name, and to the public at large.

Many of our members are engaged in research. Every good plantsman knows that different kinds of plants, and dif-

ferent clones of the same kind of plant, differ greatly in their cultural requirements, their response to pest control methods, and their response to different methods of propagation.

Our retail nurserymen members know that different varieties have widely different values and so he, as well as other horticulturists, has a vested interest in clear, concise, easily remembered non-duplicated names. We all want to know what we are working with.

Botanical names. The botanists, since the time of Linnaeus, have had a systematic scheme of naming the various kinds of plants as they appear in the wild. For a number of years they have had a Code of Botanical Nomenclature, internationally recognized, and reasonably well followed. For some ornamentals, both woody and herbaceous, the botanical name suffices, although all too often it is obscured and confused by local common names which follow no code or system.

My own interest has been with woody plants and the strawberry, gladiolus, iris, and others which are usually propagated asexually. My remarks from here on will deal primarily with woody plants, and illustrations will be from the genus *Rhododendron* which includes azaleas. For several years I have served as Registrar of names for the American Rhododendron Society, and so have followed, with some interest, developments in the field of naming plants.

What's in a name? First and most important it is a method of identification, nearly always necessary, although at certain stages a number would do as well. However, names may also be descriptive; they may, by their aptness, add value to the variety, or they may serve as a memorial to some individual or place.

Clonal names long used. Names for certain clones of woody plants, notably fruit trees, were in use as far back as we have written records in those particular fields. The widespread use of clonal names seems to have developed with modern agriculture, getting a significant start some 100 to 200 years ago. As would be expected, such usage was somewhat disorganized; names were likely to be changed at will, used over again, or given to other clones already named. There was a tendency, with certain plant groups, to ape the botanists and show off their erudition by giving Latinized names to horticultural varieties.

During the last 100 years there has been a slow, voluntary, development of reason and restraint in the naming of plants. The use of vernacular (English in Canada and the U. S. A.) names, instead of Latin, became more universal as did the disapproval of renaming, the giving of names already in use, and the questionable practice of using names superlatively laudatory such as 'World's Best'.

Although the Botanical Code is strictly technical, and gives little attention to horticultural varieties, it did set people to thinking that something should be done with horticul-

tural names. As a matter of fact, certain botanists and horticulturists had started making such proposals over 100 years ago. It was not until 1952 that a rather complete "International Code of Nomenclature for Horticultural Plants" was actually agreed upon, printed, and widely distributed. The Royal Horticultural Society of London printed the Code in a pamphlet which outlines its historical development in some detail. A later edition was published in 1961 and doubtless there will be further amendments and printings. It is not the purpose of this paper to give the details of the various sections of the Code, a copy of which may be obtained from the American Horticultural Society, Washington, D. C. The American Association of Nurserymen has published a useful leaflet, based primarily on the Code, entitled "How to Name a New Plant".

No specific legal requirements. In the U. S. A. there are no legal requirements directly governing the naming of a plant. The breeder may use any name he wishes, subject only to the laws governing libel and liability; renaming an existing variety might cause financial loss and redress might be sought in the courts.

Names may be protected by copyright. Plant patents are given to a plant entity, based on a description, and not to a name. The Code of Nomenclature does not change the legal aspects of naming plants. It usually does offer help in checking and evaluating names, and there is usually the reward of publication and the attendant publicity.

Who? Who should name a plant? This seems a simple question, and it usually is. However, in the rhododendron field we have had varieties resulting from a cross made by one man, seedling raised by another, bloomed by a third party, and the plant then sold to a fourth for introduction. Mutual agreement would be desirable, but anyone who owns an unnamed plant has a right to name it. When more than one person owns stock of a single unnamed clone there should be agreement, but if not, the first name published, with a description, in a reputable horticultural publication, is considered under the Code as being the valid name. Whether this would stand up in court in case of a suit for damages would, I presume, have to be decided by the court, on the basis of all the evidence.

When? When to name a plant is something to be considered. If the breeder is working solely for his own enjoyment and his varieties are not to be sold or distributed it doesn't make much difference if he gives a name to every seedling he raises. Most breeders probably have some hope of producing a variety worthy of being sold, or some friend who receives a plant as a gift may feel it is worthy of distribution. So *every* plant breeder really should be conservative, name only the best, and choose his names carefully.

I like to see selections numbered, or given some code des-

ignation, until trials over at least 3 or 4 blooming seasons indicate the plant is better than previously existing plants of the same general season and description. Many plants are named too soon, a good name is used up, and the variety may eventually prove not worthy of propagation. On the other hand some clones get into the trade while still under a number, and some purchaser may take it upon himself to give it a name, which may make the breeder very unhappy.

Breeders sometimes use "pet" names to identify their selections before they are introduced. Too often a plant may be given to some friend, and he lets a nurseryman have it under the pet name, which may very well be a poor one, even a duplicate of one being used for some other clone in the trade. Of the names which are sent to me for registration by plant breeders, presumably well thought out names, about one fourth have been used before for rhododendrons and hence are not valid names.

How? How to name a plant is probably the question I am supposed to answer. To comply with the Code the following are the main items of procedure: Select a name which you think is unused and a good one, make out a description of the plant and flower and send it to the official registering agency for the particular kind of plant. For rhododendrons the Registrar is Dr. Harold Fletcher of the Royal Botanic Gardens Edinburgh, Scotland. I serve as Registrar for the American Rhododendron Society and send all such names and descriptions to Dr. Fletcher for approval before publishing them in the A. R. S. Bulletin. If your name is turned down, try another. The name and description, to be valid, should be published and if it goes to Dr. Fletcher directly, or through me, and is accepted, it will be published.

Follow the Code, some of the most important points being:

Do not use a name previously used for a clone in the same genus, or one so similar as to be confusing.

Do not rename a variety already given another name. The first name published has priority.

The name must be in English (for the U. S. A. or Canada), not Latin.

The name should not be too long, two words is usually long enough. 'The Honorable Jean Marie de Montague' would not be accepted now.

Avoid the use of Mr., Mrs., Dr., A, or The as part of the name.

Avoid names of countries, of states, and preferably of prominent political figures.

Do not use names of living people without their consent.

Avoid names which exaggerate.

Avoid initials if possible.

Variety names are not affected by source, as hybrid, or selected clone of a species, bud sport or chimera.

Imported varieties. Imported varieties should be handled under their original names if they are suitable. If not, they may be translated into English, or transliterated from a non-Roman to a Roman alphabet. In certain cases, with permission of the originator, a new "commercial" synonym may be registered and used.

Group varieties. Unfortunately, the practice started in England, some 40 or 50 years ago, of giving a group, or grex, name to all the offspring of certain crosses, at first crosses between species, and later to back-crosses, and even further. Subsequent crosses, between the same species, were supposed to be given the same grex name. Many of our well known rhododendrons, such as 'May Day', 'Elizabeth', and many others are groups, not clones. In some cases clones within the group have been named, as 'Loderi King George', 'Loderi Venus', and many others. The International Rhododendron Register, and publications of the American Rhododendron Society indicate, in so far as possible, which varieties are clones and which are groups. The practice of naming group varieties is now frowned upon both here and in the British Isles, but some breeders are still doing it.

Other items in the code. The International Code suggests that names of horticultural varieties be printed in Roman letters with the words capitalized, and included in single quotation marks, and that species names be printed in italics and not capitalized. We try to do that in the A. R. S. publications.

The Code suggests, instead of horticultural variety, the word "cultivar", which I do not like and seldom use. "Horticultural variety" is a good term, used long before the word cultivar was coined, and is still used almost exclusively in the fruit growing and vegetable growing industries.

The code also suggests the parents of a hybrid be given in alphabetical order, accompanied by the signs indicating male or female. This is very confusing and I do like it because breeders and geneticists for many years have written the female parent first and there was no good reason for changing it. Few typewriters have the symbols for male and female. In A. R. S. publications, the female parent is always written first.

The actual choosing of a name is a highly personal thing and the breeder may, and often does, let his imagination run wild. I would suggest that it be short, euphonious, distinctive, and one which will appeal to the public. It may be descriptive, as 'Snow Lady', 'Pink Pearl', 'Blue Jay'. It may commemorate a location as 'Olympic Lady', 'Bulstrode Park', or a person as 'John Wister', 'Aunt Martha', or an event as 'Armistice Day'. Other names may be chosen for a variety of reasons, as 'Jock', 'Unique', or 'Little Gem'.

A good name may have a great deal to do with the commercial success of a variety. I have often heard it said that

the name 'Pink Pearl' has been an important factor in the continued popularity of that variety.

Registration. At the time the Code was adopted, provision was made for setting up a system of registration. Over 20 institutions and organizations have been designated as Registration Authorities, some in the U.S.A., some in Great Britain, and some in continental Europe. Check-lists, including all known names have been published for most important groups of ornamental plants. Breeders should contact the Registrar for their particular plant interest and work with him.

MODERATOR BROWN: Thank you, Dr. Clarke. Our next speaker has been chairman of the Ornamental Horticulture Dept. at California Polytechnic College, Pomona, since 1946. He is going to speak on the topic of facilities for teaching plant propagation. It is my pleasure to present Oliver (Jolly) Batcheller:

FACILITIES NECESSARY FOR TEACHING PROPAGATION

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I feel highly flattered that the program committee felt I was able to come up with a magic formula for "Facilities Necessary for Teaching Propagation" at the high school and junior college level.

It is pleasing to many of us to see this new interest in the horticultural field at this level. Not only is *horticulture* an ancient and honorable profession, but *home gardening* is the number one hobby in the United States. Nearly all individuals at one time or another will be concerned with the gardens around their homes.

Propagation is the heart of any horticultural program, but as the various phases of propagation involve nearly all of a horticultural unit, I am broadening my presentation to include the overall layout of an Ornamental Horticultural Unit. This will include the following: an enclosed area for the unit and for growing plants, the greenhouse and headhouse combination, the classroom and a shade or lathhouse area. I will limit my presentation to the facilities that should be planned for a new school ground, rather than attempt to suggest how an existing school ground should be made over. Unfortunately, I have not had the opportunity to visit any of the new horticultural programs here in the Northwest, and will have to base my remarks on the programs that I have observed in Southern California.

I would like to say at the outset that unless there is an intelligent, well-trained, enthusiastic teacher for the program,