

H. UITTEN: **Reflections on the nomenclature of so-called hybrids:** —
The nomenclature of hybrids and especially of the progeny of
interspecific crosses subsequent to F_1 has given much trouble to the

sections for nomenclature of the various botanical and horticultural congresses.

The domain of activity of botanists on the one hand and horticulturists on the other was demarcated rather sharply by the International Rules, so that Latin names can be used by botanists only when published validly with a Latin diagnosis, whereas horticulturists are free to do whatever they like with the names of their garden-varieties, provided they do not give them Latin names. The principal weak point and subject of dispute in the Rules, which dates back from ALPH. DE CANDOLLE (1867) is the question of the naming of hybrids.

Its weakness is due to the fact that the importance of the laws of Mendel for the origin of new forms was realized too late. When reading the rules concerning hybrids, one cannot dismiss the thought that botanists have heard only of first hybrid generations and suppose them to be either sterile or at least stable. The rule (31) that they may be designated, whenever it seems useful or necessary, by a specific name is in conflict with nr. 35, where specific names are forbidden for garden varieties. This is due to the wish to leave horticulturists a free hand. The difficulty of naming the different forms resulting from the same cross or from different crosses of forms of the same species has never been solved satisfactorily to all parties. One of the causes of misunderstandings has been that a Latin diagnosis was not made obligatory for the "specific" name of a hybrid. Doubtless such a practice would be in the spirit of the Rules, and modern taxonomists are indeed in the habit of giving descriptions, when they designate a hybrid with a binary name. Mr. SPRAGUE has also demonstrated in his reply to H. H. ALLAN (this Chronica p. 209) that a description is obligatory for the pseudospecific epithet of a hybrid.

But I should like to take a further step, *i.e.* entirely to suppress the words "hybrids" and "half-breeds" from the Rules. It is undesirable to introduce genetical methods into taxonomy and to use genetical terms in descriptive botany. The taxonomist distinguishes species and subordinate groups, but he does not recognise intermediate forms, because they have no status either in his system or in his nomenclature. Any intermediate form should be classed among existing species or among one of their varieties or it should be designated by a new "specific" or "varietal" name, accompanied by a Latin diagnosis. Every individual plant belongs to a species and derives its name from the type-specimen of that species, though art. 10 in its new version of the 3rd ed. of the Rules makes an exception for interspecific hybrids and chimaeras, which are not natural, but only more or less artificial and nomenclatorial species.

In taxonomy, hybrids do not exist, for taxonomy and its nomenclature is based on morphology (German: "typologie" or "Formverwandtschaft") and not on parentage ("Blutverwandtschaft"). Phylogenetic speculations cannot contribute to an improvement of the system of plants, though they may sometimes suggest a possible new classification. Neither should the usually uncertain origin of "hybrids" affect the views of the taxonomist as to their morphological relationship. The describer of plants must rely on his eyes and not on genetical records, because he is primarily interested in the characteristics of his objects only and not in their possible or probable origin. Everyone knows nowadays that a similar genotypical constitution may

arise in various ways by the combination of mendelian factors. A wild species may trace its descent to other existing wild species. A. MÜNTZING raised a synthetic tetraploid form by crossing the diploid *Galeopsis pubescens* with the diploid *G. speciosa*. The new form was morphologically undistinguishable from the pure wild species *Galeopsis Tetrahit* (Hereditas XIII, 1930, XIV, 1930, XVI, 1932). Not a single taxonomist would hesitate for a moment in designating this "hybrid" by the old Linnean name. What geneticists would like to call it I do not know.

Probably other wild species will be synthesized in the future. Many wild species may be the result of natural crosses in prehistoric times. Is this consideration a sufficient argument for sacrificing everything: binary names, the rules of nomenclature and taxonomy?

When there is occasion to distinguish different "hybrid" forms of the same parentage, each of these may be designated by a separate specific epithet or varietal name. Perhaps this is not in accordance with the letter of the Rules, but it is certainly in accordance with its intentions. The wording can be amended or changed entirely. I even hope that it will be done at the next congress. The spirit of the Rules will survive many congresses.

DEVENTER, KOLONIALE LANDBOUWSCHOOL.

February 1939.