CROSSWORDS

THE GESNERIAD HYBRIDIZERS ASSOCIATION

NEWSLETTER

Volume 5, Issue 4, January 1982

CrossWords is back on schedule thanks to our contributors who supplied material in rapid-fire fashion. We'll do our best to remain on schedule, with a minimum of nagging for articles, comments, questions, etc. One problem that won't go away is the increasing cost of postage that would quickly deplete our treasury. We could increase the membership fees, but it is our decision to publish threee issues per year rather than strain your budgets. The editorial deadlines for 1982 will be April 1, July 1, and October 1 for publication two months later.

We have had a few volunteers for the editorial post(s). The new ensemble will be introduced in the next issue. Please continue to send material for CW to Anne Crowley.

Please note that it is once again time to renew your membership. This is your last issue of CrossWords unless you send in your $5.00 renewal to Meg Stephenson. We've provided a handy renewal application on page 15. We hope you'll be back with us in 1982.

Anne Crowley
Ron Myhr

TABLE OF CONTENTS

THE POLLEN GRAIN AND THE OVULE

Frances N. Batcheller
Durham, New Hampshire

The successful combination of a pollen grain and an ovule is the first step in the production of a hybrid. To understand the problems in successfully completing this process, it helps to learn how these two structures perform.

Pollen is formed in the anthers of the plant. Depending on the type of dispersal, it may be very light and fluffy for wind pollination, or sticky and clinging for animal pollination. Wind borne pollen can be very obvious in the spring when pine trees shed it like "yellow peril" over everything, rimming the puddles and coating the porch floor. The yellow pigment is a good protection against ultra violet rays. Pollen less exposed to sunlight can indulge in more exotic colors such as white or blue.

Gesneriads, an advanced plant family, have developed considerable specialization in attracting animal pollinators, such as bees, butterflies, moths, birds, or bats. The color and shape of the corolla; the relative position of anthers and stigma; and the production of nectar all contribute to this specialization. The pollen is usually fairly tightly enclosed in the anther sacs and requires effort to release it. The human hybridizer may need a needle to break the sac open. Pollen is a protein. Bees require it for food. In addition, many gesneriads also provide nectar, a sugar solution, which is also food and appeals particularly to butterflies and birds. Bats require an especially strong solution of nectar for nourishment. Aeschynanthus seem to be particularly generous with nectar, as it sometimes drips from the flowers. It is a bird pollinated genus. The protein pollen is a more expensive commodity for the plant to produce than the carbohydrate nectar, as beef costs more than potatoes. It is good strategy to provide only enough pollen to dust the pollinator who is feeding on the "cheaper" nectar; but not so much nectar that the pollinator becomes surfeited and does not continue on to other similar flowers. The "innocent" flower is a highly intricate merchandizing package, and the "lillies of the field" work very hard indeed.

When pollen is transferred to a receptive stigma the pollen germinates, much like a seed, and sends out a tube which has to grow down the whole length of the style, until it reaches an ovule inside the ovary. Then fertilization can take place. This can be a perilous journey. One physical reason for using the shorter-styled plant as the female parent is to keep the journey as brief as possible, before the food supply runs out. There may be chemical incompatibility between the stigma or style tissues and the pollen - like an antigen antibody reaction. To prevent selfing, or pollination by the plant's own pollen, the unripe anthers should be removed from the female parent.

Pollen is very sensitive to environmental conditions, much more so than the ovules which are well cushioned inside the ovary. Pollen, by its function, must be exposed and accessible to whatever pollinator is attracted. Temperature, humidity, and the general health of the plant affect the pollen viability. Insecticide sprays may be damaging, so special pains should be taken to keep breeding stock clean. Low light intensity, or a photoperiod of a different length than the plant would normally encounter in its native habitat may reduce pollen viability. Pollen contains boron, so plants grown in a soil deficient in this element may need additives.

The ovules are embedded in the ovary wall or extensions from it. To become a viable seed, an ovule must be penetrated by a pollen tube, so the amount of seed harvested from a capsule is governed both by the number of ovules produced; and by the grains of pollen which reach them. Gesneriads have a single stigma, mouth or entry; and a single style or passageway into the ovary; which has a single chamber. When a stigma is receptive it usually appears sticky or shiny. In the bi-lobed form, the lobes spread apart; in the mouth-shaped form, the central orifice widens. Applying pollen on several days in succession may help to find the proper moment. Most gesneriads ripen the pollen first, then the filaments may wither and pull the sacs out of the way as the stigma becomes receptive. Delay of this type serves to prevent self-pollinization in many cases. Among gesneriads, it is usually only plants with narrow tubular corollas which self-pollinate, like Gesneria cuneifolia or Sinningia pusilla.

In some gesneriads nectar is secreted from the glands at the base of the ovary, accumulating inside the corolla, which may be enlarged at the base to form a reservoir, or stored in a projecting spur, to keep sharp-pointed pollinators from piercing the ovary. Some Codonanthe offer extra nectaries on the leaves - the red spots - to feed the guardian ants.

If pollination has been successful, the flower often drops by the next day, but this is not always the case. The ovary will gradually enlarge, becoming a capsule or berry, depending on the nature of the plant. Be sure to tag each potential seed pod with the parentage. Unfortunately not all pods contain seed. Enlargement may take place but no viable seed forms. Check carefully though, because sometimes there are one or two plump seed amid the chaff. One definition of a viable seed is that it should look three dimensional. A 10-power magnifying glass is an essential tool for the serious hybridizer, working with seeds as small as those of gesneriads.

As pollen is so easily affected by environmental conditions, do not give up after the first failures. The next try may come at a more propitious moment. There is always an element of luck as well as science in hybridization.

GESNERIACEAE CHROMOSOME NUMBERS V. Opithandra to Seemannia

Laurence E. Skog
Washington, DC

Earlier parts of this series on the chromosome counts of the species of Gesneriaceae appeared in previous issues of CROSSWORDS as follows:

I.	Achimenes to Ancylostemon	Volume 4, number 3 (September 1980), pages 7-14
II.	Beccarinda to Columnea	Volume 4, number 4 (December 1980), pages 6-15
III.	Conandron to Gesneria	Volume 5, number 1 (March 1981), pages 3-10
IV.	Gloxinia to Niphaea	Volume 5, number 2 (June 1981), pages 3-11

Chromosome counts are arranged below in alphabetic order by genus and species. The number as given by the counter in the original publication appears in the middle two columns, n or 2n. References to the publications of the numbers are given in the right hand column. Full references will be given only in the part where first cited. Please refer back to earlier parts of this series for references not included here. Particularly troublesome in finding and reporting new counts have been authors who give what appear to be new counts in their papers because they do not indicate that the counts may have been copied from an earlier paper, either their own paper or that of another author.

The names of the genera and species will be those currently in use, but the name of the plant under which the count first appeared will also be given with a cross reference to the current name of the species.

Typographical errors have been corrected where possible. I am especially interested in learning of counts or publications that I have overlooked or where an error has been made. My address is Department of Botany, NHB 166, Smithsonian Institution, Washington, DC 20560.

Genus, species, author	n=	2n=	References
OPITHANDRA			
primuloides (Miq.) B. L. Burtt		34	Fussell 1958; Ratter 1963
ORNITHOBOEA			
wildeana Craib	±16		Ratter & Prentice 1967
PALIAVANA			
prasinata (Ker-Gawl.) Benth.	13		Wiehler 1972
tenuiflora Mansf.	13		Wiehler 1972
sp.	13		Lee 1966a

Genus, species, author	n=	2n=	References
PARABOEA			
capitata Ridl.	18		Ratter & Prentice 1967
vulpina Ridl.		36	Ratter & Milne 1970
vulpina Ridl.		±36	Ratter & Prentice 1967
PARADRYMONIA			
lurida (Morton & Raymond) Wiehl. as Episcia (?) lineata G-359	9		Lee 1962a
PETROCOSMEA			
kerrii Craib		34	Fussell 1958; Ratter 1963
parryorum C. E. C. Fisch.		34	Fussell 1958
parryorum C. E. C. Fisch.	17		Ratter & Prentice 1967
PHEIDONOCARPA			
corymbosa (Sw.) L. Skog as Heppiella corymbosa (Sw.) Urb.	14		Lee 1966a
PHINAEA			
multiflora Morton	13		Lee & Grear 1963
repens (J. D. Sm.) Soler.	±26		Lee 1966b
PLATYSTEMMA			
violoides Wall.	20		Mehra & Vasudevan 1972
RAMONDA			
myconi (L.) Reichenb.	24		Lepper 1970; Ratter & Prentice 1964
myconi (L.) Reichenb. 'Alba'		48	Ratter & Prentice 1964
myconi (L.) Reichenb. 'Wisley Rose'			48 Ratter & Prentice 1964
nathaliae Pancić & Petrović		48	Ratter 1963
nathaliae Pancić & Petrović	±18		Glisic 1924
serbica Pancić	±36		Glisic 1924

Genus, species, author	n=	2n=	References
RECHSTEINERIA			
aggregata (Ker-Gawl.) O. Kuntze =Sinningia aggregata (Ker-Gawl.) Wiehl.	13		Clayberg 1967
cardinalis (Lehm.) O. Kuntze =Sinningia cardinalis (Lehm.) H. E. Moore	13		Clayberg 1967
cyclophylla Hjelmq. =Sinningia macropoda (Sprague) H. E. Moore	13		Clayberg 1967
leucotricha Hoehne = Sinningia canescens (Mart.) Wiehl.	13		Clayberg 1967
lineata Hjelmq. =Sinningia macropoda (Sprague) H. E. Moore	13		Clayberg 1967
lindleyi (Hook.) Fritsch =Sinningia sceptrum (Mart.) Wiehl.	13		Fussell 1958
macrorrhiza (Dum.) O. Kuntze =Sinningia macrorrhiza (Dum.) Wiehl.	13		Clayberg 1967
magnifica (Otto & Dietr.) O. Kuntze =Sinningia magnifica (Otto & Dietr.) Wiehl.		13	Clayberg 1967
sellovii (Mart.) O. Kuntze =Sinningia sellovii (Mart.) Wiehl. (?)	13		Clayberg 1967
verticillata (Vell.) L. B. Sm. =Sinningia verticillata (Vell.) H. E. Moore	13		Clayberg 1967
warszewiczii (Bouché & Hanst.) O. Kuntze =Sinningia incarnata (Aubl.) D. Denh.	13		Fussell 1958; Clayberg 1967; Davidse 1971
sp. G-144	13		Lee 1962a

Genus, species, author	n=	2n=	References
RHABDOTHAMNUS			
solandri A. Cunn.	37		Hair & Beuzenberg 1960
solandri A. Cunn.		±74	Ratter 1963
RHYNCHOGLOSSUM			
gardneri Theobald & Grupe as Rhynchoglossum notonianum (Wall.) B. L. Burtt	10		Ratter & Prentice 1967; Ratter 1975
notonianum (Wall.) B. L. Burtt		20	Ratter 1975
notonianum (Wall.) B. L. Burtt as Klugia notoniana Wall.	10		Eberle 1956; Eberle 1957a
obliquum Bl. as Rhynchoglossum sp. from Thailand	21		Ratter & Prentice 1967; Ratter 1975
papuae Schlechter	27		Ratter & Prentice 1967
RHYNCHOTECHUM			
discolor (Maxim.) B. L. Burtt		20	Ratter 1963
RHYTIDOPHYLLUM			
auriculatum Hook.	14		Lee 1964; Davidse 1971
berteroanum Mart.	14		Oliver & Skog 1981
leucomallon Hanst.	14		Lee 1967
tomentosum (L.) Mart. as Gesneria tomentosum L.	14		Eberle 1956
RUFODORSIA			
intermedia Wiehl.	9		Wiehler 1975c
major Wiehl.	9		Wiehler 1975c
minor Wiehl.	9		Wiehler 1975c
SAINTPAULIA			
amaniensis E. Roberts =Saintpaulia magungensis E. Roberts	15		Fussell 1958
'Amazon'		60	Ehrlich, in Lee 1962a

Genus, species, author	n=	2n=	References
SAINTPAULIA (continued)			
'Blue Amazon'		60	Wilson 1951; Wilson 1955
'Blue Boy'	15	30	Wilson 1951; Wilson 1955
'Blue Girl'		30	Wilson 1951; Wilson 1955
'Blue Leatherneck'	15		Wilson 1951; Wilson 1955
'Blush'	15	30	Wilson 1951; Wilson 1955
brevipilosa B. L. Burtt		30	Milne 1975
'Calico'		30	Ehrlich 1956
confusa B. L. Burtt	15		Fussell 1958
confusa B. L. Burtt as Saintpaulia kewensis Hort.		28	Holzer 1952
difficilis B. L. Burtt	15		Milne 1975
diplotricha B. L. Burtt		30	Milne 1975
'Double'		30	Wilson 1951; Wilson 1955
'Dupont Lavender Pink'		60	Ehrlich 1956
grandifolia B. L. Burtt	15		Milne 1975
grotei Engl.		30	Cox & Roberts 1950; Wilson 1951; Wilson 1955; Ratter 1963
intermedia B. L. Burtt		30	Ratter 1963
ionantha Wendl.		28	Holzer 1952
ionantha Wendl.	14		Sugiura 1931; Sugiura 1936b
ionantha Wendl.		30	Wilson 1951; Wilson 1955; Ehrlich, in Lee 1962a
ionantha Wendl. 'Ionantha'		30	Ehrlich 1958
ionantha Wendl. 'Ionantha Amazon'		60	Ehrlich 1958
kewensis Hort. =Saintpaulia confusa B. L. Burtt		28	Holzer 1952

Genus, species, author	n=	2n=	References
SAINTPAULIA (continued)			
magungensis E. Roberts	15		Fussell 1958
magungensis E. Roberts as Saintpaulia amaniensis E. Roberts	15		Fussell 1958
orbicularis B. L. Burtt	15		Fussell 1958; Milne 1975
pendula B. L. Burtt		30	Ratter 1963
'Pink Amazon'		30	Wilson 1951; Wilson 1955
'Pink Beauty'		30	Wilson 1951; Wilson 1955
'Plum'	15	30	Wilson 1951; Wilson 1955
shumensis B. L. Burtt	15		Fussell 1958
'Snow Prince'	15		Fussell 1958
'Snow Prince Supreme'	15		Fussell 1958
'Storm King'	15		Wilson 1951; Wilson 1955
teitensis B. L. Burtt		30	Ratter 1963
tongwensis B. L. Burtt		30	Wilson, 1951; Wilson 1955
velutina B. L. Burtt	15		Milne 1975
'White Lady'	15		Wilson 1951; Wilson 1955
SARMIENTA			
repens Ruiz & Pavon		±74	Ratter 1963
SEEMANNIA			
latifolia Fritsch =Gloxinia sylvatica (Kunth) Wiehl.	13		Lee 1966b
sylvatica (Kunth) Hanst. =Gloxinia sylvatica (Kunth) Wiehl.	13		Lee 1962b
sylvatica (Kunth) Hanst. 'Yellowbird' =Gloxinia sylvatica (Kunth) Wiehl. 'Yellowbird'	13		Lee, in Moore 1963

REFERENCES (only those not included in earlier parts of this series)

Clayberg, C. 1967. Chromosome numbers in Sinningia and Rechsteineria (Gesneriaceae). Baileya 15: 33-35.

Cox, H. & E. Roberts. 1950. Species nomenclature of the African Violet. African Violet Mag. 3(3): 5-6.

Ehrlich, in Lee 1962a see Lee 1962a.

Ehrlich, H. 1956. Cytological investigations of some African Violet varieties. African Violet Mag. 9(3): 77-84.

Ehrlich, H. 1958. Cytological studies in Saintpaulia Wendl. (Gesneriaceae). Amer. J. Bot. 45: 177-182.

Glisic, L. 1924. Development of the female X-generation and embryo in Ramondia. (translation of title). Dissertation, Univ. Belgrade. 95 pp.

Hair, J. & E. Beuzenberg. 1960. Contributions to a chromosome atlas of the New Zealand flora--4. Miscellaneous families. New Zealand J. Sci. (Wellington) 3: 432-440.

Holzer, K. 1952. Untersuchungen zur karyologischen Anatomie der Wurzel. Oesterr. Bot. Z. 99: 118-155.

Oliver, R. & L. Skog. 1981. In Chromosome number reports LXXI. Taxon 30: 508-519.

Wiehler, H. 1975c. Rufodorsia, a new Central-American genus in the Gesneriaceae. Selbyana 1: 138-149.

Wilson, G. 1951. A note on the cytology of Saintpaulias. African Violet Mag. 5(2): 18-19.

Wilson, G. 1955. A note on the cytology of Saintpaulia. African Violet Mag. 8(3): 21-22.

SEED EXCHANGE

David Zaitlin
Davis, Cal.

I would like to thank all those who responded to the last Seed Fund article. So far, I've received twelve requests for seed.

Not much is new in the way of gesneriad seed. My own plants have been greatly neglected due to academic pressures, and I've had only one contribution of late. Bunny Spitz has sent seed of two Streptocarpus hybrids that she got from Gary Hunter.

To everyone who is interested in Boea hygroscopica, and especially Mike Marriott, I'm terribly sorry to report the loss of the seed sent from Australia late last year. My house was in turmoil and the small envelope just disappeared. I, too, was looking forward to growing this gem.

In closing, I would like to thank Juanita Stone for answering my personal request for Sinningia richii seed.

NO-NO CULTIVAR NAMES GIVEN TO GESNERIADS

Paul Arnold
Binghamton, NY 13903

A helpful admonitory "Pre-Registration Check List," unsigned and presumably written by one of the new co-editors, appeared in the Fall 1978 issue of Crosswords. It listed four steps to be taken by a plant breeder before registering a cultivar name:

1. Make sure the cultivar is distinctive.
2. Choose a name of Code-sanctioned form.
3. Check registers or the Registrar to ascertain name availability.
4. Publish a description (validly, of course).

Readers were referred to "Registration Facts and Fancies," in the Winter 1978 issue of Crosswords, for additional information including the essentials for valid publication. That article acknowledged the International Gesneriad Register custom, since its beginning in 1957, to practice great leniency "in compiling registers and in issuing Registration Certificates for some cultivars that are technically invalid in some respect or accompanied by less than adequate information." Consequently, discretion is needed before imitating some of the cultivar names published in the earlier Gesneriad Registers. Also, revisions of the International Code of Nomenclature made some older Register entries unreliable guides for current usage.

The illegitimate *Sinningia* cv. 'Hircon'

One of the invalid cultivar names, included in the 1975 Sinningia Register, was 'Hircon'. First published by Nixon and Kartuz in Gloxinian, July-Aug. 1973, this cultivar (*S. concinna* ♀ X *S. hirsuta* ♂) had been produced and named by C.W. Nixon in Massachusetts. The Cultivated Plant Code, Article 31b, clearly states "The names of cultivars of hybrid origin formed by combining parts of the Latin epithets of the parent species" are invalidly published after 1 January 1959. Dr. Nixon stated that 'Hircon' was "presumably a tetraploid," so he chose to distinguish his hybrid from other cultivars obtained by crossing the same parent species by assigning the name 'Hircon', "a composite name derived from the first three letters of the two original parents." The name was then invalidly published through editorial inadvertence.

When the Sinningia Register--1975 was published, a professional botanist immediately protested the inclusion in an international plant name register of a patently invalid cultivar name without labeling it as Coderejected. I made a note to redress the oversight when the Sinningia Register is revised, an exercise that is currently under way.

When a rose isn't a rose, isn't a rose, isn't a rose . . .

An elder botanical taxonomist, Harold R. Fletcher, invoked the Cultivated Plant Code to question some *Smithiantha* cultivar names in the 1962 Gesneriad Register; specifically, 'Peachy', 'Pink', 'Pinkie', 'Primrose Dame', 'Rose Musk', and 'Rosemary'. Dr. Fletcher, then Regius Keeper and Director of the

Royal Botanic Garden Edinburgh, served the International Commission for the Nomenclature of Cultivated Plants of the International Union of Biological Sciences as Secretary of the Editorial Committee that produced the 1958 and 1961 editions of the Cultivated Plant Code. He also compiled for the Royal Horticultural Society, International Registration Authority for *Rhododendron* (including Azaleas), the International Rhododendron Register in 1958. Consequently Harold Fletcher could deal from personal experience with cultivar nomenclature problems affecting both Code makers and users.

Dr. Fletcher pointed out to me that Article 21 of the Code proscribed as inadmissible names of cultivars, after 1 January 1959, those "published in the following form: a. The botanical or common name of a genus or the common name of a species." I don't know why he passed over 'Cornell Series' in the 1962 Smithiantha Register, which violates the Botanical Code, or 'Orange', 'Orange Delight', and 'Tangerine', which conflict with Code Article 21 (1) quite as much as do the names he did question. "Primrose," of course, is the common name of the genus *Primula*, "Musk" the common name of the genus *Mimulus*, "Rosemary" the common name for *Rosmarinus officianalis*, and "Pink" the common name for genera of *Caryophyllaceae*, while "Peach" is the common name for *Prunus persica*.

He expressed uneasiness about terms like "rose" that are "also the names of colours," and suggested that 1961 Code Article 21 "needs a little bit more explanation," a deliberate understatement. The need for clarification and improvement of that particular Code Article has persisted through two decades and two Code revisions.

Rose is a prime example of a term with a long history of confusing usage, both in botany and in horticulture as well as in other disciplines, in the arts and in commerce. Dictionaries show the different meanings in addition to its usage as the common name for the genus *Rosa*; principally to designate pleated forms (rosettes) and to designate a group of roseate colors found in nature and in artifacts. The Sinningia Register--1975 placed an asterisk before cultivar names to denote registered cultivars or correct and validly published though unregistered *Sinningia* names. Nineteen of the latter contained the term "rose" or "rosy" and appeared without the asterisk. One of these cultivar/color names, 'Rose Pink', a double violator of the Cultivated Plant Code rule against names of cultivars using botanical or common names of species, was noted in the R.H.S. Horticultural Color Chart, R. F. Wilson, 1938, as "A colour name which has been in use for centuries," and giving *Prunus tenella* and *Erica vagans* as horticultural examples. Surely a name for modern cultivar namers to avoid!

Extinct cultivars listed in the Appendix to the Sinningia Register number 52 additional and range from 'Alba Rosea' to 'Wortleyana Rosea', all of them

---

(1). Article 21 of the 1961 International Code of Nomenclature for cultivated Plants became Article 31 in the 1969 revision and the term "inadmissible" was changed there to "invalidly published," but the proscription remained unchanged and continues into the 1980 revision of the Code, where it was qualified by adding the words "if it would lead to confusion," thus making the validation of cultivar names based on common name synonyms for binomials and Latin names of genera a matter of judgment by the International Registry.

Coderejected because the plants are now extinct, but the names had been validly published before 1 January 1959. A similar compilation could be made from listings in the 1975 Sinningia Register of the color name "Pink," with thirty eight entries extending from 'Buell's Pink' to 'Uphaus Pink', plus two extinct pink cultivars in the Annex.

Color names taken from botany and horticulture are legion. Some examples are: Almond, Arbutus, Camellia, Carnation, Cherry (and Cerise), Geranium, Laurel, Lotus, Moss, Orange, Orchid, Peach, Pussywillow, Strawberry, and Watermelon--and these are found only among Pink colors listed in the Color Dictionary.(2) Many such names tend to be recycled as cultivar names. Consider the realities in the Purple color group, where are found listings from Purplish Blue through Violet and Purple to Purplish Red, including several hundred color names derived from plants. Prominent among them are Fuchsia, Lavender, Lilac, Orchid, Pansy, and Violet itself. All of these are visualized (or remembered) by different people as different hues, thus complicating the task of communication by accurately describing cultivars.

After all, what color is Fuchsia? or Orchid? The color name Fuchsia, however has been defined scientifically and such definitions are accepted world wide. Samples are available in at least three well-known (to colorists) color charts: Maerz & Paul, Dictionary of Color (general), Plochere (interior decorating) and Textile Color Card Association. The Color Dictionary lists definitions as well for Antique Fuchsia, Dark Fuchsia, Oriental Fuchsia, Venetian Fuchsia, Fuchsia Pink, Fuchsia Purple, Fuchsia Red, and Fuchsia Rose. The use of color charts in describing gesneriad cultivars to establish their distinction is a subject to deal with later.

A Series Conflict

The Streptocarpus Register--1979, most recent of the series of International Gesneriad Registers, contains four cultivar names that use the term "Series." These are Cape, Nymph, Rexii, and Weismoor Series, the last one a misspelling of Wiesmoor. All four Streptocarpus cultivar group names were Coderejected; the first one because it was anticipatory of plants not yet released, all four of them because of incomplete definitions and inadequate Code compliance as cultivar collective names.

The Sinningia Register--1975 contained three such names: Missile, Royal Slipper, and Ultra Series. All of these were Coderejected, mostly because of application to poorly-defined seed mixtures or tuber aggregates. The Episcia Register--1977 had contained one Coderejected group cultivar name: Mari Series, given by an Ohio nursery to open pollinated seedlings from a Panama garden.

The increasing use of Series in cultivar names and the practice of using the term in an imprecise fashion for various aggregates of plants and not in its dictionary sense as a synonym for sequence, succession, progression, for related things arranged in order, have both been noted and deplored. Catalog

(2) Kelly, Kenneth L., and Deane B. Judd, "Color--Universal Language and Dictionary of Names," National Bureau of Standards Special Publication 440. 1976.

writers have sometimes shown Mad Hatter tendencies to use words to "mean what I want them to mean," but use of Series for cultivar designation is a violation of both the Botanical Code and the Cultivated Plant Code.

From its first issue in 1953 to the latest revision in 1980, the International Code of Nomenclature of Cultivated Plants reminded its readers that Series is a supplemental botanical category, a subdivision of Genus intermediate in rank between Section and Species. Article 25 of the Code states "The names of such categories, if used, are placed within parentheses immediately after the generic name." There is no legitimate use for Series in the naming of plants except to indicate a botanical category with the rank of genus.

Straining for Coderejection

Among the Coderejected cultivars listed in the 1979 Streptocarpus Register were twelve that ended in the word "Strain," preceded by Burdett's, Constant Nymph, Dobie's Prize, Giant Special, Gold Medal, Improved Aldenham, Peed's Superb, Sander's Large Flowered, Veitch's Improved, V.O.H. Gratus, V.O.H. Pallidus, and V.O.H. Pulchellus. These appeared in horticultural literature at intervals between 1861 and 1974, mostly in the United Kingdom. Nearly all the names related to extinct seed lines, i.e., cultivars not found in catalogs after 1950, and most lacked descriptions adequate to distinguish the cultivar from similar but different ones. Were it not for their disappearance from the trade and their inadequate descriptions, all twelve would be Coderejected anyhow because the term "Strain" was made part of these cultivar names.

Article 12 of the Cultivated Plant Code clearly states "The practice of designating a selection of a cultivar as a strain or equivalent term is not adopted in this Code. Any such selection showing sufficient differences from the parent cultivar to render it worthy of a name is to be regarded as a distinct cultivar."

Just what terms the Cultivated Plant Code authors regarded as equivalent to Strain is not clear. The Code gives no examples. Most dictionaries define Strain both up and down the family tree; as (a) all the descendants of a common ancestor (progeny), and (b) any of several lines of ancestors of an individual (ancestry). Recent English language dictionaries follow closely the Oxford English Dictionary, 1933, as the following tabulation shows.

DICTIONARY SYNONYMS FOR STRAIN (NOUN)

American Heritage*	Random House**	Oxford English	Webster's New Collegiate***
race	race	race	
stock	stock	stock	stock
line		line	line
breed			
ancestry			ancestry
lineage			lineage
kind			
sort			
			progeny
			ecotype****

*Having characteristics within a species, not usually a separate breed or variety.

**Having some intrinsic quality to distinguish it from other plants of the variety. An artificial variety of a species of cultivated plant.

***A group of presumed common ancestry with clear physiological but usually not morphological distinction. Broadly: a specified infraspecific group.

****A taxonomic subspecies surviving as a distinct group through environmental selection and isolation.

The term Line, cited above as a dictionary synonym for Strain--whether or not the Code authors consider it equivalent--is found in Article 11 of the Cultivated Plant Code, which mentions lines of normally self-fertilizing individuals and inbred lines of normally cross-fertilizing individuals. In a note following Code Article 11b, multiline composite variety is mentioned. Perhaps in the next revision of the Cultivated Plant Code its authors will give some examples of cultivar designations they consider equivalent to Strain, or they may even omit this perplexing alternative as a redundancy.

continued in the next issue of CW

MEMBERSHIP APPLICATION

NEW _____ RENEWAL _____

NAME _____

ADDRESS _____

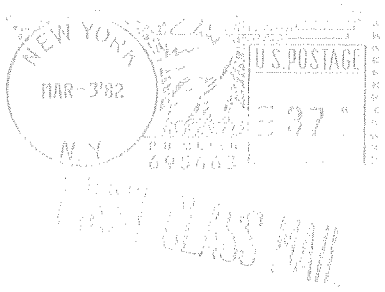
_____

_____

Please enclose a cheque or money order for $5.00 in U.S. funds, payable to the Gesneriad Hybridizers Association. Members outside of the U.S. or North America, please include $1.00 extra to cover additional postage costs. Mail to Meg Stephenson, 1415 Goldsmith, Plymouth, MI, U.S.A. 48170.

CrossWords is published three times yearly by the Gesneriad Hybridizers Association, a non-profit organization established to facilitate the sharing of information about the hybridizing of gesneriads and to further the appreciation of the results of that hybridizing. Subscription is by membership. Membership fees are $5.00 and applications, along with cheques, should be sent to Meg Stephenson at the address below. Editorial correspondence may be sent to the editor. Editorial deadlines are April 1, July 1, and October 1 for publication two months later. All editorial content is copyright by the G.H.A.

Gesneriad Hybrizers Association
1415 Goldsmith
Plymouth, MI
48170



Peg + Art Belanger
140 Howie Ave.
Warwick, R.I. 02888