again, as far as we know, except by Poiret (Dict. Sc. Nat. 32: 476. 1824). Since it is also very unlikely that the Willdenow and Medikus names were published simultaneously (on the contrary: the indications we have point to priority for the Dispositio) we cannot invoke Art. 64 of the Code (Paris and Montreal editions) which says that in such a case the first author who adopts the name in one sense must be followed. For these reasons we propose to follow established custom, which is to accept Usteria Willdenow.

Our choice is therefore to give Cothenius priority over Medikus and we hope that this choice will be followed until further evidence to the contrary is brought forward.

We may perhaps add one more note on the history of the publication of Usteria Willdenow. The genus was first described, but not named, by Willdenow in a letter dated 7 Nov. 1789 in Römer et Usteri, Magazin für die Botanik 8: 151. Apr (?) 1790. "Vor einigen TAGEN untersuchte ich einige africanische Pflanzen ... fand ich ein sehr merkwürdiges neues Genus ...". He gives the characters and states that he is going to publish this new genus in the Schriften der Berlinischen Gesellschaft NaturforschenderFreunde. In the meantime, however, the generic name Usteria ('Vsteria') was published for it in Cothenius' book on p. 1 in a note saying "Communicata ab amicissimo Doctore Willdenow". Since Cothenius died on 5 January 1789, and since Willdenow discovered Usteria only in November 1789 it is clear that the name should be attributed to Willdenow alone. The circumstantial evidence quoted in this paper makes it also probable that it was indeed Willdenow who edited Cothenius' manuscript and who inserted the 1789 genera and the Usteria paragraph.

Christian Andreas Cothenius was born on 14 February 1708 in Anklam; he died in Berlin on 5 January 1789. He was trained to be a medical doctor, became "Hofrath" of king Frederic William I and "Leibarzt" (court physician) of king Frederic (II) the Great in Potsdam. He published very little: a few medical treatises and in botany only the Dispositio.

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ABOUT THE USE OF PERSONAL NAMES IN TAXONOMICAL NOMENCLATURE

Aldo Pesante (Torino)

The preparation of an earlier note on a nomenclatural subject, led me to consider more attentively than before the use of personal names in taxonomical nomenclature, and the advantages and disadvantages which are connected with this practice. The subject, which at first seemed to me simple and of little interest, revealed itself afterwards, on the contrary, to be complicated and worthy of a detailed discussion. This is the reason for the present note.

The use of personal names in scientific nomenclature began with nomenclature itself, with latin binomial nomenclature at least. Linnaeus in his Species plantarum made considerable use of such names, and since then this use has never stopped, nor has it been, as far as I know, validly contested by anyone. The objection could be raised that there is now no reason for questioning this use. Is not a two centuries' long acceptance of it sufficient to prove its suitability?

I will try to answer these supposed objections by giving a detailed exposition with abundant examples, as is necessary in a paper like this one, the purpose of which is essentially persuasive.
The main reason for the use of personal names in nomenclature is sentimental; one wishes by their use to honour someone to whom one is bound by affection or by esteem. In past times, when manifestations of obsequious homage were much more frequent than they are today, new genera and species were often dedicated to high-ranked persons who had nothing to do with science; recently also an author gave to a number of species names of renowned men of antique Greece. But today this abuse has ceased, and students generally dedicate new entities to colleagues who are specialists on the group, and primarily to their teachers, less frequently to collectors, or to other persons. Mutual dedications are not uncommon and even recently there have still been one or two who gave their own name to a species or a genus, so strong is our longing to bind our name, or that of beloved persons, to something which could survive.

If the person so remembered is one whose name would otherwise hardly pass outside the narrow boundaries of his own institute, this method can, by flattery, have a beneficial inciting effect, and thus become a positive factor for the progress of science.

Besides these reasons, there is another, of an essentially practical nature; the ever increasing number of new species, to which one is obliged to give a name, can sometimes put the discoverer into difficulty; this can happen more often to those specialists who revise old genera and thus create several new species. Frequently differing only in quantitative characters. In these cases the use of personal names can be a help. The long series of specific epithets, much less the many generic names, of this kind cannot always, however, be thus justified; frequently, I think, it is indolence which induces naturalists to have recourse to this method, which avoids the trouble, harder than one might think, of finding an expressive name for a new species.

These are the reasons supporting the use of personal names. I will now give those against it.

It has always been one of the main preoccupations of the various commissions which led gradually to the establishing of the present Code of botanical nomenclature*, “to avoid or to reject the use of forms and names which may cause error or ambiguity or throw science into confusion” (preamble). The Code deals with this fundamental subject in several places, defining different points of it, as I will discuss later, but is concerned only with orthography, while orthophony is wholly neglected, as if it had nothing to do with nomenclature.

An explanation of this fact can, I think, be found in the historical development of nomenclature. From its beginning in the middle of the eighteenth century until not many decades ago, communication among students was almost exclusively written, either by printed matter or, especially in more ancient times, by letters (which even gave the stamp of official recognition to scientific discoveries). In this situation, the rules of pronunciation of the names were superfluous. But today the efficiency and rapidity of transport facilitates personal contacts among students, with study travels and international congresses, and thus standardisation of pronunciation becomes more and more urgent.

Taxonomic names (I consider only those of genera and species, which are the most numerous) can be: old names (nearly all Latin or Greek ones) or vernacular names of genera and species, names arbitrarily formed, or derived from persons or from countries; adjectives derived from persons or from countries, qualitative adjectives. Of all these, only vernacular names and those derived from persons or from countries can give rise to difficulties as far as pronunciation is concerned; but the first ones

are infrequent, and those of countries are also not numerous, at least in comparison with those of persons. Therefore I will consider only these last, although some arguments will be valid for the others too.

As far as pronunciation is concerned, the Code, as I have said, makes no regulations, unless one takes as referring to it as well as to orthography, Principle V, which says: “Scientific names of plants are Latin or are treated as Latin”.

If the Commission for nomenclature tries to resolve this problem (and sooner or later it must do so), it will find itself, as regards the names of persons, faced by this dilemma: are these names to be pronounced according to the phonetics of Latin or to that of the languages to which they belong?

Let us consider the two cases.

At a first glance it could appear logical that, nomenclature being Latin, foreign names should also bring themselves into agreement with the rules of Latin, but if examined more attentively, this solution appears to be illogical, impractical and even repugnant to our mind. If we Italians, in ordinary speech, pronounced, according to Italian phonetics (which differ very little from those of Latin), names such as Sauvage, Fouquier, Desrousseaux, Church, Wright, Underwood, Lightfoot, Scheuchzer, Kirschstein, Ungnad, we would make anyone shiver who had even only a vague notion of the phonetics of the languages to which such names belong. Why then should such a violation be admitted in scientific nomenclature? What is substantially different in this regard between those names and the corresponding taxonomical derivates Sauvagesia, Fouquierra, Rousseauxia, Churchii, Wrightii, Underwoodia, Lightfootia, Scheuchzeria, Kirschsteinia, Ungnadia?

Each name has in fact its own physiognomy, which is derived from its origin and from its historical evolution within its own language; to pronounce it according to the rules of another language, which cannot take into account all that, is to denature it, to reduce it to a crowd of letters (and sounds) without any significance. Latin has been adopted as the international language in scientific nomenclature, and if it were suppressed, as has been proposed, the result would be chaos; but the names which one gives to new species can be pronounced in Latin only if they are Latin, or Greek, since these latter have, since remote times, been adapted to Latin according to well defined rules.

Some examples will more readily carry conviction as to the inadequacy of Latin (or any other language) for the pronunciation of names (and words in general) from different languages.

The letter j, considered in Latin as non-existent or equal to i, has different sounds in each of the following names: Ranoejovicia, Jefferisonia, Juania, Jussieuia. And likewise the digraph ch, which in Latin always has the same sound, has five different sounds in the following names: Scortechinia, Charlwoodia, Deschampsia (the preceding s is mute), Eichhornia, Blumenbachia.

It is impossible, moreover, to distinguish between groups of consonants in monosyllabic radicals which are connected and correspond to a single sound, and groups formed by the approach of two components in compound words, which groups are not connected and therefore do not correspond to a single sound: for inst. Biddulphia and Shep.herdia; Gleditschia and Bret.schneideria; Bruckenthalia and Kort.halsia; Khekia and Stack.housia; Shortia and Prings.heimia, Males.herbia (h mute).

In other instances, on the contrary, letters or groups of letters which express a nearly identical sound would be pronounced, according to the Latin phonetics, in many different ways; so for inst. the soft c, represented in the following names by the roman type letters: Celsia, Sanchezia, Czekanowskia, Pritchardia, Nitschkea, Kretzschmaria.
In many names, moreover, Latin pronunciation is not only illogical, but also difficult and bad: I cite, in addition to those above: *Vouauxiella, Eschscholtzia, Shropshiria, Pazschkea.*

The other solution, that is to pronounce the names according to the phonetic rules of their respective languages, comes up against considerable difficulties. The most serious of them is that such a solution would require the knowledge, by all naturalists, of the phonetic rules of many foreign languages, which is, evidently, utopia. Therefore, if the Code were to state, or even only to suggest, that personal names should be pronounced in this manner, it would be Babel. Let us imagine that at an international congress a lecturer pronounced in their respective languages names such as *Leea, Michauxia, Vogelia* (and they are not among the worst) to people without linguistic knowledge who did not know these names in advance: what could they understand?

Even if one knows the phonetics of the principal foreign languages one will be in doubt when one has to pronounce names the language of which one does not know; and this happens more often than one would think. I give some examples, indicating the nationality of the named person: *Bergera* (germ.), *Duchekia* (czech.), *Gerardia* (engl.), *Loudonia* (scottish), *Richardia* (engl.), *Roucela* (fr.), *Saurauia* (germ.), *Tegueria* (swe.), *Zignoa* (it.).

Sometimes the naturalization of students in countries of different language leads to a gradual adaptation of the pronunciation and even the spelling of their names to the language of these countries, so that one no longer knows how these names are to be pronounced.

Moreover, when taxonomic names are derived from personal names there are added to these, following invariable rules, terminations indicating their status as generic names or specific epithets, and, since these do not necessarily harmonize with the personal names, there sometimes arise still more doubts, although of less importance: for instance: *Neomillispaughia, Goodenoughii, Michauxia, Rouxii, Bogolepoffii*.

There are also personal epithets with the termination -*ii*, which could derive from names ending in a consonant as well as from names ending in -*i*.

Still another matter of doubt, and consequently of lack of uniformity, is the accentation of names. Must personal names maintain the original accent (if known!) or not? Must one say, for inst. *Listera* or *Listèra*; *Văughani* or *Vaughanii*? For epithets with the termination -*ii* no doubt subsists, but this termination is only suggested (rec. 73 C, b) and therefore not always used instead of -*i*.

Faced with these problems, what solution do naturalists adopt?

As far as I know, each one goes his own way, according to his linguistic knowledge and to his taste, even pronouncing a part of a name according to latin phonetics, the other part according to the phonetics of the language to which it belongs, or to which he thinks it belongs, for instance *Sauvagesia* is frequently pronounced *Sovagesia*.

In some rare cases a diacritical mark gives the answer; thus for instance the diaeresis that some authors put on *Kasanoöpsis* acts as a warning that the two *o* are not pronounced *u*; from which one deduces that in the mind of these authors this generic name, formed from a japanese personal name and a greek suffix, and introduced into latin nomenclature, ought to be pronounced in english.

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* The writing of the following epithets: *Woronowii, Woronovi* is more correct than the termination -*offii*.

** The Code, in rec. 23A, illustrating the formation of the epithets, cites, as the substantival and adjectival forms from a personal name, *clusii* and *clusianus*; but one must say that it has chosen a very rare exception!
The difficulties and the uncertainties which are large enough in the principal
european languages, the source of nearly all the preceding examples, are even greater
for other languages, especially those with non-latin alphabet, where transliteration
is entailed. There exist, at least for some groups of languages, international rules of
transliteration, but these will not serve our needs owing to the diacritical marks
which they require, and which the Code rightly refuses. This renunciation leads to
arbitrary transcription, in which the phonetic rules of the language of the author are
generally followed, even when latin transcription would be easier: for instance,
Tranzschelia instead of Transcellia; Jacewskia instead of Jacevskia (if one prefers
to maintain the k, more practical than ch). There are, moreover, in languages with
non-latin alphabets, sounds not reproducible with latin letters, which are a further
source of distortion in both written and spoken forms.

One can foresee that these disadvantages will become more frequent as, in future,
the scientific contribution of remote countries, now in the phase of active develop-
ment, becomes more considerable.

The Code, I repeat, says nothing on this question, but sooner or later the problem
must be resolved, and this will not be easy.

Leaving pronunciation, or rather considering it now together with orthography,
I will emphasize the inadequate way in which personal names accord with the
recommendations of the Code.

Rec. 20 A, c and 23 B, b suggest that one should not make names very long or
difficult to pronounce. These recommendations are very little observed. With this
statement one does not intend to say that all personal names are difficult to write
and to pronounce, and that the others have opposite qualities. Fortunella and Rosel-
linia are certainly better than Polylagenochromatia, Phrymaleptostachya and Pleuro-
placosphaeria; but for descriptive names one can at least rely upon the taste of the
authors, whilst the form of the other ones is determined by that of the person whom
one wishes to remember, who has not always a name running readily off the tongue
nor well suited for latinizing, as was sometimes the custom in past times. And so our
nomenclature was enriched with names such as Biebersteinia, Bizzozeriella, Boenning-
hausenia, Cienfuegosia, Crucshanksia, Fleischhackia, Gaylussacia, Gratelouphia, Hohen-
buehelia, Junghuhnia, Kaufusslia, Koelreuteria, Leuchtenbergia, Peyerimhofiella,
Razumofska, Roscoepoundia, Serebrianikowii, Spagazzinula, Vancampenhouti, Woj-
nowicia: names which can be melodious to people of the same language, but are
unpleasant to others.

Rec. 20 A, d says “not to make names by combining words from different
languages” but nearly all personal names are taken from languages other than Latin
or Greek, and therefore, if combined with latin or greek prefixes or suffixes, give
linguistic hybrids: for inst. Bakerophoma, Boedijnopeziza, Fremontodendron, Phaeo-
schiffnerula, Raciborskiomyses, Schroeteriaster, Weimannodora, Xystozukalia.

Rec. 20 A, e suggests that one should indicate, if possible, by the formation or
ending of the name the affinities or analogies of the genus; but if one wants to
follow this recommendation for names of persons, one offends against the preceding
one (see above).

Rec. 73 B, a says: “When the name of the person ends in a vowel the letter a
is added, except when the name ends in -a, when -ea is added.”

However, if the pronunciation of personal names must be that of the languages
to which they belong, one does not in some cases have the possibility of avoiding
a double a; for inst. Duroia (but so far as aesthetics is concerned, it is difficult
to say which of the two solutions is, in this case, the less unfortunate).
Rec. 23 B, d suggests that one should avoid specific epithets formed of two or more hyphened words; but the care of authors of new species to see that the person commemorated is not confused with others of the same name has led more than once to the contravention of this sound rule of simplicity; and so we have a Cercospora Donnell-Smithii, a Rhinia Gwynne-Vaughanii, a Phomopsis Fischeri-Eduardii, an Ascochyta Zimmermannii-Hugonis; and, although not in contradiction with any written rule, a genus Oscarbrefeldia. We have indeed also qualification epithets formed of two hyphened words (for inst. Hydrocharis Morsus-ranae, Melampsora Laricis-Caprearum), but these at least mean more as a result, which the others do not. This use of double personal names is reprehensible, since one ought not to put personal considerations before general ones, but owing to the superabundant use of personal names, it is doubtful whether this abuse will stop spontaneously.

The orthographic and orthophonic difficulties and uncertainties mentioned above seem to me sufficient to give an idea of the confusion caused by the use of personal names in scientific nomenclature. These difficulties and uncertainties will inevitably get worse if this use continues, with an increasing number of botanists in countries with languages very different in structure from Latin.

Another considerable inconvenience of personal names is that they take the place of other names, which, if well chosen, can have a descriptive basis and are therefore also easier to remember.

Rec. 33 A of the 1952 Code [now deleted, Ed.] said: “The specific epithet should preferably give some indication of the appearance, the characters, the origin, the history or the properties of the species. If taken from the name of a person, it usually recalls the one who discovered or described it, or was in some way connected with it”.

This was a very appropriate recommendation; but why did it not apply also to genera? Why may a generic name “be taken from any source whatever, and may even be composed in an absolutely arbitrary manner”? A judicious choice of names would be much more advisable for the genera, because they are representative, normally, of many species, and therefore recur more frequently!

The mnemonic value of names is an interesting subject, but generally neglected; one prefers to leave it to psychologists. And yet it has, in our case, considerable importance. The greater the increase in the number of the known species and of those which one is obliged to know for professional purposes, the more urgent is the need to be able to fix them in the mind in the most simple and firm manner. Then, it is evident that a significant name, which recalls a character of the species, has more mnemonic value than a name of person, unless everybody knows it to be connected with the named species; but this happens very seldom.

Here also an example will aid in clarifying one’s ideas:

Higher fungi are one of the systematic groups for which names have been chosen with more care; but here also exceptions exist.

Let us consider, as examples, some names:

Tricholoma caligatum recalls to us the fringe of hairs which borders the hat, and the covering of scales which may be seen on the stalk below the ring, like a stocking (the termination -loma indicates to us, moreover, although not in an absolute manner, the systematic group to which the species belongs, according to the former rec. 30 A, d (1952 Code, now deleted, Ed.).

Pleurotus perpusillus represents to us the lateral insertion of the hat and the exiguity of the fungus;
**Armillaria mellea** indicates the presence of a ring which surrounds the stalk, and the honey-coloured hat;

**Marasmius scorodonius** indicates the contraction of the drying fungus and its garlic odour.

These characters will not only be useful for recognizing the species, but also for remembering them. On the contrary, what do these other names, also of higher fungi, suggest to us: *Trogia Königi, Gauthiera Ottthii, Octaviania Hesseana*? If the reason for these names could still be found (in the original writings if given, in some rare textbook which reports it, in some even rarer dictionary of botanical etymology). one could have only an unnatural connection of very weak, if any, evocative force.

One can find numerous similar examples in all systematic groups; so for instance in the family Chenopodiaceae: *Chenopodium, Corispermum, Camphorosma*, and, opposited, *Kochia*; in the Caryophyllaceae: *Dianthus, Gypsophila, Saponaria, Tunica*, and *Velezia*; in the Saxifragaceae: *Saxifraga, Chrysosplenium, Philadelphus*, and *Zahlbrucknera*; in the Compositae: *Pulicaria, Buphthalmum, Asteriscus, Calendula*, and *Siegesbeckia, Rudbeckia*.

The objection could be raised that personal names also can very well call to mind the corresponding species, as *Magnolia, Dahlia, Robinia, Begonia, Gardenia, Camellia*, and still many others. Certainly, with long use, these names also become familiar and acquire a decided mnemonic value, but this happens through a very long process of assimilation, which cannot apply to the very large number of new species, which are continually introduced into nomenclature.

The considerable number of personal names which saturate the nomenclature is not even proportional to that of the persons who more or less deserved to be remembered, but is much larger than this, because to a same person are often dedicated more, sometimes, many, species, or even genera. So for instance, the following genera take their name from the mycologist Henderson (omissions excepted): *Hendersonia* (2), *Hendersoniella, Hendersonina, Hendersoniopsis, Hendersonula, Hendersonulina* (2), and then *Microhendersonia, and Phyllohendersonia, and Urohendersonia* (yet dedicated to him, and not, as one could think, to some Urohenderson, *viro clarissimo et cauda ornato*), and *Neohendersonia*. And with the same prefixes but with different names, other series of names have been made; so for inst. with the prefix neo-: *Neobarclaya, Neobertia* and so on to *Neozimmermannia*.

The habitat of parasites on hosts with names of this sort is further cause of repetition of personal names: for inst. *Pestalozzia Banksiana, Libertella Gleditschiae, Septoria Rudbeckiae*.

This congeries of names is a heavy burden in nomenclature, and if we do not have a clear perception of this, the reason is that we have borne this burden, like original sin.

But what is the destiny of these names, which we prize so much? It is not always brilliant. Many of them fall into synonymy. There are young naturalists especially, whose judgment is not yet mature but who are anxious to create new species and to dedicate one to their teacher, who nourish the perennial source of synonyms.

But even if these names remain valid, how many are the possible causes of their degradation!

Too often written, if epithets, with small initial letter, distorted in the most different languages, degraded with beastly, obscene, or at least unlovely attributes and combinations ( *Ceratolejeunia, Trichodelitschia, Rostrontischkea, Thaxterogaster, Mutinus Muelleri, Verpa Brebissoni, Echinophallus Lauterbachii, Ithyphallus Ravenelli, Sordaria Winteri, Coprolepa Saccardoi* [close to a more connatural *C. meridaria*],

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Philocopra Hansenii, Lobelia syphilitica); confused, if very common, in a plentitude of homonyms (think of the Smith and Mueller), subjected even to ludicrous extra-taxonomical adaptations (venturicide); what remains uncontaminated in them, except the good intention of the donor?

Time gives the final blow: understood at first in their commemorative significance by a comparatively small number of naturalists, these names turn subsequently to names without any human character: names of vegetables and no more.

Conclusion

The use of personal names in nomenclature leads to difficulties of writing and pronunciation, to doubts, to confusion. This use has, besides, the great disadvantage of putting in the place of expressive names, others which are not, and which have, therefore, less mnemonic value.

One may expect that this situation will in future become progressively worse: on the one hand the more frequent oral relations among students will make the disadvantage of arbitrary pronunciation of personal names more apparent than it has been; on the other hand a more intense scientific activity by students of countries whose languages have non-latin alphabets will, more than in the past, introduce into nomenclature obscure names which do not harmonize with Latin and which will become altered in writing and pronunciation.

How can we put an end to all this?

Names at present existing may not be changed: Code (art. 17) and good sense do not allow it; nor can one rely on a latinization of foreign names, as in the distant past: it would be an anachronistic and absurd hope. Old rec. 33 A (Specific epithets should preferably give some indication of the appearance etc.) was suitable, but inefficient because not compelling.

The only efficient measure would be a rule which excluded in the future the use of personal names for the coinage of scientific names in taxonomic nomenclature. I propose such a rule to the Commission for the revision of the Code of Botanical Nomenclature.

IS SAPOSHNIKOVIA A VALID GENUS?

Sophia G. Tamamschian (Leningrad)

This question is raised in connection with the fact that in the most recent works on the family Apiaceae (Hiroë 1958, Kitagawa 1960) the genus Saposhnikovia is treated as a synonym of the genus Ledebouriella. Is Hiroë justified in replacing the species name S. divaricata (Turcz.). Schischk by the new combination L. divaricata (Turcz.) Hiroë?

Let us trace the history of the nomenclature of both genera.

Hoffmann (1816) described the genus Rumia with three included species, viz. R. seseloides, R. taurica and R. microcarpa; at present the last species is classified as belonging to the genus Hippomarathrum. As has been established by Koso-Poljan- sky (1915) R. taurica is identical with a species erroneously referred by Willdenow to the genus Sanicula and named S. crithmifolia. The new combination, Rumia crithmifolia (Willd.) Koso-Poljan. has been generally adopted in the literature on the taxonomy of the Apiaceae.

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