

greatest growth to take place in the topmost third, less growth in the middle third, and very slight or no growth in the bottom third. In some plants he divided his topmost interval into two parts and found that in many cases the topmost half grew less than the one beneath, although there were a great many variations from this.

In conclusion, the typical *Panaeolus retirugis*, grown under green-house conditions, requires from 4 to 5 days for the complete development of the fruit body after appearing above the ground. The stem grows slowly at first, then very rapidly for from 40 to 56 hours, then for about twenty-four hours slowly again until it ceases.

The pileus grows slowly but steadily at first and enters on its most active period of growth just before this ceases in the stem. The width remains slightly less than the length until this time. It now broadens more rapidly and continues increasing at this rate while the length increases only slowly. The pileus in many cases continues its expansion after the stem growth has been completed.

Growth is no more rapid by night than by day. The growth region of the stem lies near the top, the greatest growth taking place a few mm. below the top of the stem.

This work was undertaken at Cornell University, under the direction of Professor G. F. Atkinson, to whom I am indebted for many helpful suggestions and for the use of photographs of the developing *Panaeolus retirugis*.

ITHACA, NEW YORK,

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BOSSEKIA OR RUBACER

BY P. A. RYDBERG

Dr. Greene * has replaced my generic name *Rubacer* by *Bossekia* Necker.† I wish to make a protest, not so much against the replacement of the name as against the spirit and manner in which

* Leaflets 1 : 210. Ap 1906.

† Elem. Bot. 2 : 91. 1790.

it was apparently done. Dr. Greene credits himself with having relieved the genus "of a name so cheap and ill-made as *Rubacer*." As another botanist has placed that name among the hybrid words,* I shall try to meet both accusations at once.

The word *Rubacer* is composed of two good Latin words, *Rubus*, raspberry and *Acer*, maple; hence it is no hybrid of two languages. In making compound words, the most common usage in the Latin language was to take the stem of the first word (in this case *Rub-*), and to insert the connecting vowel *-i-*, between the two components, if the second part began with a consonant. If it began with a vowel, the *-i-* was omitted. Hence *Rub-acer* is formed according to Latin usage. Perhaps it might have been better to reverse the order and to call the genus *Acer-i-rubus*; but as this is very awkward to pronounce, *Rub-acer* was preferred. The reason why *Acerirubus* might have been better, is that in Latin as in modern languages the modifying word was usually placed first in compounding words; but this was not always the case. If I prefer to call the old *Rubus odoratus* L. a raspberry-maple instead of a maple-raspberry, I am well within my rights. Dr. Greene's claim that I have named it "Red Maple" can not be taken seriously, for in Latin red maple would always be *Acer rubrum*, and Dr. Greene knows just as well as I, that if a compound word should be formed, in which the first component should be *ruber*, red, it would be very bad orthography to leave out the *-r*. If I had intended to make a name meaning red-maple (observe, not red maple), it would have been *Rubracer* instead of *Rubacer*.

No, with Dr. Greene the "ill-making" was not so much this, as the fact that he dislikes compound names formed by combining two generic names, as he shows in a preceding article.† To him *Cytisogenista*, *Lilionarcissus*, *Malvalcea*, *Sidalcea*, *Conioselinum*, *Ammoselinum*, etc., are "ill-made" and "cheap." Yet, Dr. Greene has made at least one such name, *Schoenocrambe*.‡ Perhaps he had some other reason for making that name; but

* T. Holm, Ont. Nat. Sci. Bull. 1: 36. 1905.

† Leaflets 1: 202.

‡ Pittonia 3: 124. 1896.

the mere fact that there existed two genera *Schoenus* and *Crambe* places the name in the same category.

If I should use the same kind of sarcasm as Dr. Greene used when he claimed that *Rubacer* meant red maple, I would claim that his genus *Madronella** was a diminutive of the Italian "madrona," and hence meant "a little matron"; but it is "cheaper" than that. Euphonious as it is, it is formed by "pie-ing" the letters of the first part of *Monardella*. Notwithstanding Dr. Gray's remark, that "a neat anagram is not bad," surely there is no easier ("cheaper") way of forming new generic names than making *Abdra* (is this even neat?) from *Draba*, *Sibara* from *Arabis*, *Celome* from *Cleome*. They are wholly meaningless, and a child playing with blocks may succeed just as well. They are at least as "cheap" and "ill-made" as *Rubacer*. But one should not dispute about tastes.

Now as to the validity of the name *Bossekia* Necker, for the genus *Rubacer* Rydb. There is nothing in Necker's diagnosis that points directly to *Rubus odoratus* L. It is only by inference that anyone can come to the conclusion that that species is intended, and it is only from the fourth and the last lines of the diagnosis that any clue can be had. These read respectively :

"*Folia simplicia. Caulescentes proles.*"

"*Folia simplicia. Quid. Rub. Linn.*"

Supposing that Necker had the first edition of Linnaeus' *Species Plantarum*, there are in it but two species of *Rubus* with simple leaves, *Rubus odoratus* and *Rubus Chamaemorus*. Dr. Greene indicates that the latter may safely be excluded, for he states concerning Necker : "He also defined it [*i. e.*, *Dalibarda*] as that it might include the still older genus *Chamaemorus*." When Dr. Greene made this statement, he had apparently not studied Necker's diagnosis of *Dalibarda* as closely as he ought. It would be too presumptuous to claim that he intentionally or carelessly misrepresented the facts. There are three points in this diagnosis, with which *R. Chamaemorus* essentially disagrees. These are :

"*Semina, 5, nuda. Scaposae proles.*"

* Leaflets I : 168.

"*Fructific. monoica.*"

"*Styli, 5.*"

Rubus Chamaemorus L. is not scapose or scapiferous, as *Dalibarda* is; the herbaceous flowering stem has often three or four leaves. Someone may claim that Necker's idea of *scaposus* differed from the accepted one of the present day; but this claim does not hold in this case, for Necker characterized *Rubus* as "*Folia composita, caulescentes proles.*" He evidently included in it two well-known European species with herbaceous stems and compound leaves, which were described in the first edition of the *Species Plantarum*, viz., *Rubus saxatilis* and *R. arcticus*. Of these the latter at least is one-flowered and of the same habit as *R. Chamaemorus*.

Rubus Chamaemorus is never monoecious, but dioecious by the abortion of either the gynoecium or the androecium; while *Dalibarda* is monoecious as Necker described it. For emphasis, he also added after the description:

"*Obs. Mares & feminae, in iisdem individuis.*"

Necker gave for *Dalibarda*: "*Styli, 5,*" "*Semina, 5, nuda.*" In *Dalibarda* the pistils are usually five and hence the drupelets five. The latter are rather dry and perhaps that is the reason why he gave the character: "*Semina, 5, nuda*"; while in the corresponding places in the diagnoses of *Rubus* and *Bossekia*, he gave: "*Bacca, minoribus formata*" (berry formed by smaller ones) and "*Bacca, minoribus 1-spermis, constans.*" *Rubus Chamaemorus* has many pistils and many drupelets forming a large so-called berry. Necker could never have intended to include it in his diagnosis of *Dalibarda*.

The preceding discussion has been founded upon the supposition that Necker referred to the first edition of Linnaeus' *Species Plantarum*, in his diagnoses of *Rubus*, *Dalibarda* and *Bossekia*. This, however, can not have been the case; for under *Dalibarda* also, he gave:

"*Folia simplicia. Quid. Rub. Linn.*"

In the first edition of *Species Plantarum*, Linnaeus recognized *Dalibarda* as a valid genus, distinct from *Rubus*. In the second, he reduced *Dalibarda* and changes *D. repens* L. to *Rubus Dali-*

barda L. Necker must, therefore, refer to this edition or the third, which is practically identical, or else to some edition of the *Systema*, perhaps the 12th or the 13th. In either case the problem becomes much more complicated, because in all of these there are not less than four species of *Rubus* with simple leaves. In the second edition of *Species Plantarum*, *Rubus moluccanus* (which is not a *Rubacer*) is the first mentioned of these. Should not this according to Dr. Greene's own interpretation * be the type of *Bossekia*? The zoölogists often take as the type the European species best known at the time. In this case it would be *R. Chamaemorus*, which was certainly intended by Necker as a part, at least, of his *Bossekia*. As far as the facts now are known, no rule, as far as I can see, will make *Rubus odoratus* the type.

According to the "American Code," *Bossekia* is not properly published, for no type is specified, nor is it identifiable with any definite published species. President Jordan probably expressed the opinion of the majority of the American zoölogists, when he made the following statement: "A generic name should have no standing if resting on definition alone, nor until associated with some definite species." The majority of the botanists of this country evidently hold the same opinion.

Under the circumstances, I can not accept *Bossekia* in place of *Rubacer*, until Dr. Greene or someone else proves definitely that *Rubus odoratus* was the actual type of Necker's genus *Bossekia*.

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TEREBINTHUS MACDOUGALI, A NEW SHRUB FROM LOWER CALIFORNIA†

BY J. N. ROSE

The name *Bursera* L. (1762) is not only a homonym of *Bursera* Loef. (1758), but is a true synonym of both *Elaphrium* Jacq. (1760) and of *Terebinthus* P. Browne (1756). The latter as the earliest published name is here taken up.

* See *Pittonia* 4: 104. Ja 1900.

† Published by permission of the Secretary of the Smithsonian Institution.



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