

THE NOMENCLATURE OF *RUSSULA* SPECIES AND THE SYDNEY RULES

R. SINGER* & R. MACHOL**

A recent paper by Th. W. Kuyper & M. van Vuure shows general agreement with an earlier paper by Singer & Machol on many nomenclatural problems and on the number of *Russula* species affected by the new starting point rules. A few minor disagreements with regard to contradiction between Arts. 13.1 and 63 are mentioned, and those regarding *R. delica*, *R. nitida* and *R. atropurpurea* are explained. We conclude (contrary to Kuyper & van Vuure's conclusions) that their statements confirm that Art. 13.1 as it now stands is detrimental to stability in nomenclature of Basidiomycetes, and unsettling as well as burdensome to the working taxonomist, and should be changed according to Proposal 42 now before the Nomenclature Committee.

In a paper on the nomenclature of *Russula* species, Kuyper & van Vuure (1985)—hereafter K&V—have invited 'comments on the nomenclatural . . . conclusions arrived at in this paper.' In the majority of cases they agree with Singer & Machol (1983)—hereafter S&M. In one case where they disagree (*R. aurea* Pers.), we now concede that they are correct. In a few cases, taxonomical or nomenclatural interpretations differ slightly, a consequence not of oversight by either K&V or S&M, but of the difficulties arising from the new rules (Art. 13.1, Sect. 4 of the ICBN 1983). We would therefore have refrained from further comment, had K&V not chosen to draw conclusions with regard to the present rules that are not only in contrast to our proposals (Singer & al., 1984) but to K&V's own nomenclatural statements. They admit that the new Art. 13.1 (1983) causes 'temporary' instability of nomenclature. In fact, it also causes new, otherwise unnecessary library 'research', controversies such as the ones we have to deal with at present, new proposals to clarify the rules, and endless proposals to conserve and reject. All this not only makes the new rules less clear and more difficult than the ones that were accepted for 75 years, but also causes sterile extra work, expense, and publication. K&V recognize the necessity to check almost any name in *Russula* (and, of course, other genera) for newly appearing homonyms (such as *R. rosea* Quél.); they apparently recognize that since 1983 it has become impossible to 'reject the use of names which may cause error or ambiguity or throw science into confusion' (ICBN, Preamble); and they acknowledge the fact that most working mycologists are reluctant to accept the consequences of illegitimacy which has increased under the new rules.

* Field Museum of Natural History, Chicago, Illinois, U.S.A.

** J. L. Kellogg Graduate School, Northwestern University, Evanston, Illinois, U.S.A.

K&V (p. 454) say 'although (the new wording of Art. 13.1 d) will necessitate several name changes . . . we firmly (believe) that only by this procedure a correct and stable nomenclature of the agarics could be achieved.' They also assert 'It is our firm conviction that only this voluntary self-restraint can lead to a stable nomenclature.' Alas, the postulated self-restraint is quite rare; we could cite long lists of new names and new combinations on the basis of mostly quite shaky or, with a view to the ever-changing rules, quite ephemeral arguments. The lack of restraint of such authors seems to us matched by the lack of restraint of the rule-changers who, as in the case of Art. 13, did the voting first and the investigation of the consequences afterwards.

Having stated this, we believe that the discussion of each individual case in *Russula* is of secondary importance. Some comments are attached here not in a spirit of controversy, but in order to show that, under the new rules more than under the old ones, final nomenclatural decisions are dependent on many and often complicated considerations.

1. *Russula delica* vs. *R. exsucca*

The interpretation of *A. piperatus* β *exsuccus* Pers., Obs. 2: 41 as being typified by *Agaricus giganteus* Leyss. Fl. Hal. no. 1213 does not save the epithet *delica* under the Sydney rules. In the first place Persoon himself (1801: 429) dropped this quotation, retaining only Buxb Cent. 4 p. 1 t. 1 and his own original diagnosis; secondly if Leysser's taxon is indeed considered as a representation of *exsuccus*, it is either not identical with *Leucopaxillus giganteus* (Pers.) Sing. & Sm., or if it is identical, it is in contrast with the original description, since the lamellae are described as, 'sparsis, subdistantibus' while they are crowded to subclose in *L. giganteus*. According to Art. 7.8 and 7.17 (ICBN 1983: 7) a neotype has to be chosen to typify Persoon's and Fries's (ssp./var.) *exsuccus* and since according to Art. 8 (l.c.: 9) the type cannot be *A. giganteus* because it is in contrast with the protolog, and 'the type . . . of a . . . intraspecific taxon is a single specimen . . .' (Art. 9) it is proposed that the specimen F.M. 1030764, *Singer C 7671* (F), (as *Russula delica* Fr.) be the neotype of *A. piperatus* β *exsuccus* Pers. This is the only legitimate and honest procedure, considering that all *Russula* specialists tend to interpret *A. exsuccus* as a *Russula* of the *delica* group, most probably identical with *R. delica* Fr., and that var. *exsuccus* Fr. 1821 is sanctioned and based on Persoon (1801).

2. *Russula nitida*

Russula nitida (Pers. ex Fr.) Fr. and *Agaricus nitidus* Pers. ex Fr. (or Pers.: Fr.) are now (since 1983) undoubtedly superfluous names in the sense of Art. 63. As sanctioned name (1821) it should have been typified with *A. purpureus* Schöff. or *A. risigallinus* Batsch (Art. 7.11; 7.13). If the fungus is then called *R. purpurea* (Schöff.) Quél. (1897) it becomes a homonym of *R. purpurea* Gill. (1884). If it is called *R. risigallina* (Batsch) K&V it becomes a synonym of one of the species of the *R. lutea* group. The *R. nitida* in the sense of modern monographers, i.e. sensu Singer or sensu J. Schäffer, Romagnesi, etc. is therefore not available anymore. We (Singer & Machol, 1983) have considered it doubtful whether Art. 63 can supersede Art. 13.1 d, and we still believe that the rules are not at all explicit or clear about this. K&V think that they are. But the typification

of *R. nitida* according to Art. 7.11 can hardly be challenged. It is another question whether *A. nitidus* Pers. is a superfluous name. We interpret Persoon's words as expressing doubt merely whether *A. purpureus* Schaff. is a synonym of *A. nitidus* (var. *nitidus*) or var. *atropurpureus*, not as doubtful about its identity with the species sensu lato. The remark may indeed be interpreted differently. Yet it makes no difference whose interpretation is correct unless we admit K&V's new proposal to change Art. 7.17. A meaningful discussion of the consequences and acceptability of the Sydney rules cannot be made if we do not accept the rules as they are presented to us.

3. *Russula atropurpurea* vs. *R. krombholzii*

Neither of the names is directly linked with the Sydney rules but here again we face a complexity that has caused various conclusions which after a more detailed examination of the nomenclatural and taxonomical facts appear rather unwarranted.

When Krombholz described the species as *A. atropurpurea* he was not fully aware of its variability, and it was only after later specialists included a paler form or variety that certain synonymies became applicable. It is now believed probable or possible that this pallescent form is partly or entirely conspecific with *R. depallens* Pers. and/or Fr. as admitted by R. Maire, Singer, J. Schäffer and Romagnesi. Since *R. atropurpurea* (Krombh.) Britz. is but a later homonym of *R. atropurpurea* Peck, we have to consider calling the species *R. depallens* Pers.: Fr. inasmuch as this species is a sanctioned one (Fries, 1821: 58). The present rules make it tempting to designate a neotype in this sense, but Persoon's description (more than Fries's) contains a few data that contradict this interpretation so that it appears to be prudent to refrain from such typification. However, there is a species which almost certainly is the same as this pallescent form of *R. atropurpurea* (Krombh.) Britz., viz. *R. bresadolae* Schulzer in Hedwigia 24: 139. 1885. In our opinion there is no other interpretation possible, and Cooke's picture of *R. depallens* is certainly identical. It is however possible that the pallescent fungus is more than an occasional form or variety of the typically deep purple form(s) but even if such a possibility were considered, *R. krombholzii* Shaff. would still be antedated by *R. atropurpurina* (Sing.) Crawshay, Spore Orn. Russ.: 128. 1930. Just in order to be complete, we also mention the fact that *A. luteoviolaceus* Krombh. has been indicated as synonymous with *R. atropurpurea* (Krombh.) Britz. by Singer and Romagnesi, in both cases doubtfully. Our present opinion is that this species is specifically different from *R. atropurpurea* (Krombh.) Britz. Which then is the correct name of *R. atropurpurea* (Krombh.) Britz. non Peck? We do not have the final answer but it is not *R. krombholzii* Shaff., nor could it be *R. depallens* Fr. if Art. 7.17 is rescinded as K&V propose.

REFERENCES

- ICBN, see VOSS, E. G. & al. (1983).
KUYPER, Th. W. & VUURE, M. van (1985). Nomenclatural notes on *Russula*. In *Persoonia* 12: 447–455.
PERSOON, C. H. (1801). *Synopsis methodica fungorum*. Göttingen.

- SINGER, R. & MACHOL, R. E. (1983). The Sydney Rules and Nomenclature of *Russula* Species. In Mycotaxon 18: 191–200.
- SINGER, R., PONCE DE LEON, P., MACHOL, R. E. & SMITH, A. H. (1984). Proposal 42. In Taxon 33: 745.
- VOSS, E. G. & al. (1983). International Code of Botanical Nomenclature (ICBN). In Regnum Vegetabile 111.