



## Type-studies in American *Russula* subsection *Decolorantes* (Russulales, Basidiomycota), part II.

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### Abstract

In this second contribution on native American species in *Russula* subsect. *Decolorantes*, the authors focus on four additional species that exhibit a blackening context: two species from the West Coast, *R. californiensis* and *R. occidentalis*, and two species from the East Coast, *R. rubescens* and *R. rubriceps*. A key to the species in *Decolorantes* is provided. *Russula californiensis* and *R. rubescens* are lectotypified.

**Key words:** fungi, North America, taxonomy

### Introduction

With more than 330 native *Russula* species already reported from the United States and an estimated overall diversity of nearly 1500 species for the country (Bruns 2012), the genus is clearly one of the more difficult groups of fungi to identify. A prerequisite for taxonomic progress in this huge genus is to provide modern type studies for all the already described species as a first step toward more reliable identification. Five years ago, we started this project by screening all original diagnoses of native American russulas and regrouping them on the basis of shared features that were “easily” recognizable in the field, e.g. all russulas having unequal gills, all species with a fishy smell and green FeSO<sub>4</sub> reaction, all entirely white russulas, etc... In many cases, these type studies have considerably altered current species concepts (e.g. Adamčík *et al.* 2013, Adamčík & Buyck 2012) and in some cases have already resulted in publication of provisional keys to particular subsections of the genus in North America, such as for species in *Russula* subsect. *Xerampelinae* Singer (1932: 240, Buyck & Adamčík 2013a) and *Russula* subsect. *Lactarioideae* Maire (1910: 120, Buyck & Adamčík 2013b).

With this paper, we present our second contribution to russulas that have a blackening context but lack the regular intercalation of lamellulae between gills as occurs in *Russula* subgenus *Compactae* (Fries 1838: 349) Bon (1986: 53, Adamčík & Buyck 2014). Such species had previously been placed in *Russula* subsect. *Decolorantes* Maire (1910: 121) with the European *R. decolorans* (Fries 1821: 56) Fries (1838: 361) as the type species. This group of blackening species was later divided in two groups, one for those blackening species having typical pileocystidia and lacking incrustations in the pileipellis (subsect. *Decolorantes sensu stricto*) and one for those lacking typical pileocystidia but having incrustations (*Russula* subsect. *Vinosinae* Singer [1986: 815]). In our first contribution on *Decolorantes* (as “*Decolorantinae*”) in North America (Adamčík & Buyck 2011), we discussed the types of *R. burkei* Burlingham (1924: 21), *R. cinerascens* Beardslee (1918: 164), *R. magna* Beardslee (1918: 183) and *R. subdensifolia* Murrill (1941: 441). The remaining American taxa attributed to this group will be treated in this paper: two species from the West Coast, *R. californiensis* Burlingham (1936: 262) and *R. occidentalis* (Singer) Singer (1958: 155), and two species from the East Coast, *R. rubescens* Beardsley (1914: 91) and *R. rubriceps* (Kauffman) Singer (1943: 151).