

## Checklist of the Argentinean Agaricales 6. *Paxillaceae*, *Gomphidiaceae*, *Boletaceae* and *Russulaceae*

N. NIVEIRO<sup>1</sup> & E. ALBERTO<sup>2\*</sup>

<sup>1</sup>*Instituto de Botánica del Nordeste (UNNE-CONICET).*

*Sargento Cabral 2131, CC 209 Corrientes Capital, CP 3400, Argentina*

<sup>2</sup>*Instituto de Investigaciones Biotecnológicas (UNSAM-CONICET)*

*Intendente Marino Km 8.200, Chascomús, Buenos Aires, CP 7130, Argentina*

CORRESPONDENCE TO \*: [ealberto@intech.gov.ar](mailto:ealberto@intech.gov.ar)

ABSTRACT— A checklist of species belonging to families *Paxillaceae*, *Gomphidiaceae*, *Boletaceae*, and *Russulaceae* was made for Argentina. The list includes all species published up to 2011. Sixteen genera and 54 species are recorded: 15 species from *Paxillaceae*, 3 from *Gomphidiaceae*, 11 from *Boletaceae*, and 25 from *Russulaceae*.

KEY WORDS—*Agaricomycetes*, *Paxillus*, *Russula*, *Lactarius*, *Phlebopus*

### Introduction

In previous papers, partial checklists of the Argentinean *Agaricales* were presented for the families *Amanitaceae*, *Pluteaceae*, and *Hygrophoraceae* (Niveiro & Albertó 2012a); *Coprinaceae* and *Strophariaceae* (Niveiro & Albertó 2012b); *Bolbitaceae* and *Crepidotaceae* (Niveiro & Albertó 2012c); *Tricholomataceae* (Niveiro & Albertó 2012d) and *Agaricaceae* (Niveiro & Albertó 2013a). The purpose of this study is to establish a baseline of knowledge about the diversity of species described from the families *Paxillaceae*, *Gomphidiaceae*, *Boletaceae*, and *Russulaceae* in Argentina for future studies of mushroom biodiversity.

### Materials & Methods

#### *Nomenclature and classification systems*

This checklist was based on all publications recorded for Argentina up to 2011. Nomenclature and classification systems follow Singer (1986) for families, and Kirk et al. (2008) and Index Fungorum (<http://www.indexfungorum.org>) for genera and species. Synonyms were simplified and only the basionym and the names recorded for Argentina of each species are included. Index Fungorum was consulted for current names of species and synonyms.

For journal abbreviations, the Botanico Periodico Huntianum ([http://fmhibd.library.cmu.edu/fmi/iwp/cgi?db=BPH\\_Online&loadframes](http://fmhibd.library.cmu.edu/fmi/iwp/cgi?db=BPH_Online&loadframes)) web site was used. For author abbreviations, the International Plant Names Index (IPNI) (<http://www.ipni.org>) and Authors of Fungal Names (<http://www.indexfungorum.org/names/AuthorsOfFungalNames.asp>) were used. References cited for each species were ordered firstly by author in alphabetical order and secondly by year of publication.

Remarks were only added for those taxa where we found a conflict such as: species not validly published (NVP), the holotype is missing (MH), doubtful name, synonyms, unpublished transfer of genus, or when the distribution of the species was not completely clear. Books are cited by the year in which they were really published and not the year printed in the publication. This is the case, for example, of “Pródromo de la flora Agaricina Argentina” which is cited as Singer & Digilio (1952). In such cases, two years are provided for

species citation in the “literature cited” section, the real year of publication between parenthesis and year printed in the book between brackets.

### **Distribution**

Species distribution is cited according to the Argentinean Province (State) where it was collected using abbreviations presented in Table 1. A map with the political division of Argentina and the abbreviations for each state can be seen in Niveiro & Albertó (2012a).

TABLE 1— Abbreviations used for Provinces of Argentina.

<b>Province</b>	<b>Abbrev.</b>	<b>Province</b>	<b>Abbrev.</b>
Antártida	ANT	Mendoza	MZA
Buenos Aires	BA	Neuquén	N
Catamarca	CAT	Rio Negro	RN
Córdoba	CBA	Salta	S
Chaco	CH	Santa Cruz	SC
Chubut	CHU	Santiago del Estero	SE
Corrientes	CTES	Santa Fe	SF
Entre Ríos	ER	San Juan	SJ
Formosa	FSA	San Luis	SL
Islas Malvinas	IM	Tucumán	T
Jujuy	J	Tierra del Fuego	TF
La Pampa	LP	No data	ND
La Rioja	LR	Patagonian Andes forest	AP
Misiones	MNES		

It should be taken into account that although many species were recorded in the provinces of the Patagonia Argentina (Neuquén, Rio Negro, Chubut, Santa Cruz, Tierra del Fuego), most of them were found in the Patagonian Andes forest which is located in a narrow strip to the west of the southern provinces.

### **Results**

CHECKLIST OF ARGENTINEAN *PAXILLACEAE*, *GOMPHIDIACEAE*, *BOLETACEAE* AND *RUSSULACEAE*

#### PAXILLACEAE

***Austropaxillus*** Bresinsky & Jarosch

***Austropaxillus boletinoides*** (Singer) Bresinsky & Jarosch, *Pl. Biol. (Stuttgart)* **1**(3): 332, 1999.

Bas: *Paxillus boletinoides* Singer, 1952 [1951].

Dist: N, RN, TF

Ref: Horak (1980), Raithelhuber (1977, 1988, 1991, 2004), Singer (1953b, 1954, 1964), Singer & Digilio (1952).

**Austropaxillus muelleri** (Berk.) Bresinsky & Jarosch, *Pl. Biol.* (Stuttgart) **1**(3): 332, 1999.

Bas: *Paxillus muelleri* Berk., 1887.

Dist: ND

Ref: Singer (1969).

Obs: Singer (1969) cited this species as recorded in southern South America, but he did not clear up if it was present in Argentina.

**Austropaxillus statuum** (Speg.) Bresinsky & Jarosch, *Pl. Biol.* (Stuttgart) **1**(3): 332, 1999.

Bas: *Agaricus statuum* Speg., 1887.

= *Flammula statuum* (Speg.) Sacc., 1891.

= *Paxillus statuum* (Speg.) E. Horak, 1967.

Dist: TF, AP

Ref: Farr (1973), Gamundí & Horak (2002), Horak (1967, 1980), Raithelhuber (1988, 1991, 2004), Singer (1950a), Spegazzini (1887, 1922).

**Hygrophoropsis** (J. Schröt.) Maire ex Martin-Sans

**Hygrophoropsis aurantiaca** (Wulfen) Maire, *L'Empoisonnem. Champ.*: 99, 1921.

Bas: *Agaricus aurantiacus* Wulfen, 1781.

Dist: N, RN

Ref: Singer (1954, 1964).

**Paxillus** Fr.

**Paxillus argentinus** Speg., *Anales Mus. Nac. Buenos Aires* **6**: 139, 1899 [1898].

Dist: BA

Ref: Farr (1973), Raithelhuber (1991, 2004), Singer (1950a, 1964), Singer & Digilio (1952), Spegazzini (1899, 1909).

**Paxillus boletinoides** f. **olivascens** E. Horak, *Fl. criptog. Tierra del Fuego* **11**(6): 46, 1980 [1979].

Dist: TF

Ref: Horak (1980), Singer (1969).

Obs: *Paxillus boletinoides* was transferred to *Austropaxillus* (Bresinsky et al. 1999). However, the combination of the form to *Austropaxillus* has not been done.

**Paxillus boletinoides** var. **leucopus** Singer, *Nova Hedwigia* **7**: 104, 1964.

Dist: RN  
Ref: Singer (1964, 1969).  
Obs: see comment above in *P. boletinoides* f. *olivascens* .

**Paxillus boletinoides** var. **blestianus** Raithelhuber, *Metrodiana* **3**(1): 25, 1972.

Dist: N, RN, TF  
Ref: Raithelhuber (1972, 1977, 1988, 1991, 2004).  
Obs: see comment above in *P. boletinoides* f. *olivascens*.

**Paxillus defibulatus** Singer, *Lilloa* **25**: 434, 1952 [1951].

Dist: N, RN, TF  
Ref: Singer (1953b, 1954, 1964, 1969), Singer & Digilio (1952).

**Paxillus involutus** (Batsch) Fr., *Epicr. syst. mycol.* (Upsaliae): 317, 1838.

Bas: *Agaricus involutus* Batsch, 1786.  
Dist: S, T, N, RN, TF  
Ref: Raithelhuber (1977, 1988, 1991, 2004), Singer (1950a, 1953b, 1954, 1964, 1969), Singer & Digilio (1952), Wright & Albertó (2002).

**Paxillus statuum** var. **unicolor** (Singer) Raithelhuber, *Fl. Mycol. Argentina, Hongos* III (Stuttgart): 194, 1991.

Bas: *Paxillus defibulatus* var. *unicolor* Singer, 1952.  
Dist: N, TF  
Ref: Raithelhuber (1991, 2004), Singer (1953b, 1969), Singer & Digilio (1952).

#### **Neopaxillus** Singer

**Neopaxillus echinospermus** (Speg.) Singer, *Lilloa* **22**: 633, 1951 [1949].

Bas: *Naucoria echinosperma* Speg., 1889.  
= *Flammula echinospora* Speg., 1902.  
Dist: T, CBA  
Ref: Farr (1973), Raithelhuber (1988, 1991, 2004), Singer (1950a, 1964), Singer & Digilio (1952), Spegazzini (1902, 1909).

#### **Ripartites** P. Karst.

**Ripartites amparae** Singer, *Schweiz. Z. Pilzk.* **28**: 195, 1950.

Dist: T  
Ref: Raithelhuber (1988, 1991, 2004), Singer (1950c), Singer & Digilio (1952).

**Ripartites tricholoma** (Alb. & Schwein.) P. Karst., *Bidrag Kännedom Finlands Natur Folk.* **32**: 477, 1879.

Bas: *Agaricus tricholoma* Alb. & Schwein., 1805.  
 = *Paxillus panaeolus* Fr., 1861.  
 Dist: CBA, N  
 Ref: Raithelhuber (1988, 1991, 2004), Singer (1969), Spegazzini (1926a).

**Tapinella** E.-J. Gilbert

**Tapinella panuoides** (Batsch) E.-J. Gilbert, *Les Livres du Mycologue* III: 68, 1931.  
 Bas: *Agaricus panuoides* Fr., 1818.  
 = *Paxillus panuoides* (Fr.) Fr., 1838.  
 = *Tapinella panuoides* f. *ionipus* (Quél.) Šutara, 1992.  
 Dist: BA, RN, TF  
 Ref: Raithelhuber (1991, 2004), Singer (1964, 1969).

GOMPHIDIACEAE

**Chroogomphus** (Singer) O.K. Mill.

**Chroogomphus papillatus** (Raithelh.) Raithelh., *Metrodiana, Sonderh.* 2: 16, 1983.  
 Bas: *Chroogomphus rutilus* var. *papillatus* Raithelh., 1974.  
 Dist: BA  
 Ref: Raithelhuber (1974, 1983, 1988, 1991, 2004).

**Chroogomphus rutilus** (Schaeff.) O.K. Mill., *Mycologia* 56(4): 543, 1964.  
 Bas: *Agaricus rutilus* Schaeff., 1774.  
 = *Gomphidius rutilus* (Schaeff.) S. Lundell, 1937.  
 Dist: BA  
 Ref: Raithelhuber (2004), Singer (1964), Wright & Albertó (2002).

**Gomphidius** Fr.

**Gomphidius maculatus** (Scop.) Fr., *Epicr. syst. mycol.* (Upsaliae): 319, 1838 [1836-1838].  
 Bas: *Agaricus maculatus* Scop., 1772.  
 Dist: BA  
 Ref: Ramadori (1985).

BOLETACEAE

**Boletus** L.

**Boletus loyo** Speg., *Anales Mus. Nac. Buenos Aires* 23: 9, 1912.  
 Dist: T, N

Ref: Farr (1973), Raithelhuber (1991), Singer (1959), Singer & Digilio (1957), Spegazzini (1912).

### **Boletinellus** Murrill

**Boletinellus monticola** (Singer) Watling, *Edinburgh J. Bot.* **54**(2): 245, 1997.

Bas: *Gyrodon monticola* Singer, 1957.

Dist: T, CAT

Ref: Becerra et al. (2005b), Singer (1964), Singer & Digilio (1957, 1960).

**Boletinellus rompelii** (Pat. & Rick) Watling, *Edinburgh J. Bot.* **54**(2): 243, 1997.

Bas: *Phylloporus rompelii* Pat. & Rick, 1907.

= *Gyrodon rompelii* (Pat. & Rick) Singer, 1938.

Dist: T, CTES

Ref: Singer (1964), Singer & Digilio (1957, 1960).

### **Leccinellum** Bresinsky & Manfr. Binder

**Leccinellum crocipodium** (Letell.) Bresinsky & Manfr. Binder, *Regensburg. Mykol. Schriften.*

**11**: 233, 2003.

Bas: *Boletus crocipodius* Letell., 1838.

= *Phylloporus platensis* Speg., 1926.

= *Leccinum nigrescens* (Richon & Roze) Singer, 1947.

Dist: BA

Ref: Farr (1973), Singer (1950a), Singer & Digilio (1957), Spegazzini (1926b).

### **Phlebopus** (R. Heim) Singer

**Phlebopus braunii** (Bres.) Heinem., *Bull. Jard. Bot. État Bruxelles* **21**: 243, 1951.

Bas: *Boletus braunii* Bres., 1890.

= *Phaeogyroporus braunii* (Bres.) Singer, 1944.

= *Boletus bruchii* Speg., 1926.

= *Phlebopus bruchii* (Speg.) Heinem. & Rammeloo, 1982.

= *Phaeogyroporus tropicus* f. *microporus* Singer, 1950.

Dist: S, T, MNES, CBA

Ref: Deschamps & Moreno (1999), Singer (1950a, 1964), Singer & Digilio (1957, 1960),  
Spegazzini (1926a, 1926b)

**Phlebopus tropicus** (Rick) Heinem. & Rammeloo, *Mycotaxon* **15**: 389, 1982.

Bas: *Boletus tropicus* Rick, 1907.

= *Phaeogyroporus tropicus* (Rick) Singer, 1944.

= *Phaeogyroporus tropicus* f. *macroporus* Singer, 1950.

Dist: S, T, MNES, CBA

Ref: Singer (1950a, 1964), Singer & Digilio (1957, 1960), Spegazzini (1926b), Wright & Wright (2005), Wright et al. (2008).

**Phylloporus** Quél.

**Phylloporus caballeroi** Singer, *Beih. Sydowia* 7: 101, 1973.

Dist: J

Ref: Singer (1973).

**Suillus** P. Micheli ex Adans.

**Suillus granulatus** (L.) Roussel, *Fl. Calvados*, Edn 2: 34, 1796.

Bas: *Boletus granulatus* L., 1753.

Dist: T, MNES, ER, BA

Ref: Niveiro et al. (2009), Singer & Digilio (1957), Wright & Albertó (2006).

**Suillus lakei** (Murrill) A.H. Sm. & Thiers, *Monogr. North Amer. Species Suillus*: 34, 1964.

Bas: *Boletinus lakei* (Murrill) Singer, 1945.

Dist: AP

Ref: Barroetaveña (2006).

**Suillus luteus** (L.) Roussel, *Fl. Calvados*, Edn 2: 34, 1806.

Bas: *Boletus luteus* L., 1753.

Dist: AP

Ref: Barroetaveña (2006).

**Xerocomus** Quél.

**Xerocomus chrysenteron** (Bull.) Quél., *Flore mycologique de la France et des pays limitrophes*: 418, 1888.

Bas: *Boletus chrysenteron* Bull., 1791.

Dist: CBA, BA

Ref: Singer (1964), Wright & Albertó (2006).

RUSSULACEAE

**Lactarius** Pers.

**Lactariusalni** Singer, *Sydowia* 15(1-6): 83, 1962 [1961].

= *Lactarius cupularis* (Bull. ex Pers.) Quél., sensu Singer 1952.

= *Lactarius cupularoides* Raitheh., 1990.

Dist: T

Ref: Raithelhuber (1990, 1991, 2004), Singer & Digilio (1952).

**Lactarius deliciosus** (L.) Gray, *Nat. Arr. Brit. Pl.* (London) **1**: 624, 1821.

Bas: *Agaricus deliciosus* L., 1753.

Dist: MNES, BA, AP

Ref: Barroetaveña (2006), Niveiro et al. (2009), Raithelhuber (2004), Wright & Albertó (2002).

**Lactarius obscuratus** (Lasch) Fr., *Epicr. syst. mycol.* (Upsaliae): 346, 1838.

Bas: *Agaricus obscuratus* Lasch, 1828.

Dist: T

Ref: Raithelhuber (1987).

**Lactarius omphaliiformis** Romagn., *Bull. Trimestriel Soc. Mycol. France* **90**(2): 146, 1974.

Dist: T, CAT

Ref: Becerra et al. (2005a).

**Lactarius piperatus** (L.) Pers., *Tent. disp. meth. fung.* (Lipsiae): 64, 1797.

Bas: *Agaricus piperatus* L., 1753.

Dist: ND

Ref: Singer (1969).

Obs: Singer (1969) cited this species as recorded in southern South America, but he did not clear up if it was present in Argentina.

**Lactarius salmonicolor** R. Heim & Leclair, *Rev. Mycol.* (Paris) **18**: 221, 1953.

= *Lactarius salmoneus* R. Heim & Leclair, 1950.

= *Lactarius subsalmoneus* Pouzar, 1954.

Dist: BA, RN

Ref: Raithelhuber (1974, 1987, 1991, 2004).

Obs: *L. salmoneus* R. Heim & Leclair is a *nom. illegit.*

**Russula** Pers.

**Russula albidula** Peck, *Bull. Torrey Bot. Club* **25**: 370, 1898.

Dist: BA

Ref: Raithelhuber (2004), Wright & Albertó (2002).

**Russula alnijorullensis** (Singer) Singer, *Agaric. mod. Tax.*, Edn 4 (Koenigstein): 824, 1986.

Bas: *Russula emetica* subsp. *alnijorullensis* Singer, 1950.

Dist: T, CAT

Ref: Becerra et al. (2005a), Raithelhuber (1987, 1991, 2004), Singer & Digilio (1952).

**Russula amethystina** Quéél., *Compt. Rend. Assoc. Franç. Avancem. Sci. Assoc. Sci. France* **26**: 450, 1897.

Dist: BA

Ref: Raithelhuber (2004), Wright & Albertó (2002).

**Russula emetica** (Schaeff.) Pers., *Observ. mycol.* (Lipsiae) **1**: 100, 1796.

Bas: *Agaricus emeticus* Schaeff., 1774.

Dist: T, CAT

Ref: Singer (1950b).

**Russula fuegiana** Singer, *Rev. Mycol.* (Paris) **15**: 125, 1950.

Dist: N, RN, TF

Ref: Gamundí & Horak (2002), Horak (1980), Raithelhuber (1977, 1987, 1991, 2004), Singer (1950a, 1954, 1969), Singer & Digilio (1952).

**Russula haasii** Raithelh., *Hong. Argentin.* **2**: 130, 1977.

Dist: TF

Ref: Raithelhuber (1977, 1987, 1991, 2004).

**Russula livescens** (Batsch) Bataille, *Fl. Monogr. Astérosporales*: 76, 1908.

Bas: *Agaricus livescens* Batsch, 1786.

Dist: BA

Ref: Raithelhuber (1974, 1987, 2004), Wright & Albertó (2002).

**Russula lutea** (Huds.) Fr., *Epicr. syst. mycol.* (Upsaliae): 363. 1838 [1836-1838].

Bas: *Agaricus luteus* Huds., 1778.

Dist: BA

Ref: Raithelhuber (2004), Wright & Albertó (2002).

**Russula major** Singer, *Sydowia* **8**: 153, 1954.

Dist: N, RN

Ref: Raithelhuber (1987, 1991, 2004), Singer (1954).

**Russula mallophora** Singer, *Rev. Mycol.* (Paris) **15**: 130, 1950.

Dist: N, RN, TF

Ref: Raithelhuber (1987, 1991, 2004), Singer (1950b, 1954, 1969), Singer & Digilio (1952).

**Russula montivaga** Singer, *Rev. Mycol.* (Paris) **15**: 131, 1950.

Dist: J, S, T, CAT, TF

Ref: Raithelhuber (1987, 2004), Singer (1950b), Singer & Digilio (1952).

**Russula nothofaginea** Singer, *Rev. Mycol.* (Paris) **15**: 127, 1950.

Dist: N, RN, TF

Ref: Gamundí & Horak (2002), Horak (1980), Raithelhuber (1987, 1991, 2004), Singer (1950b, 1954, 1969), Singer & Digilio (1952).

**Russula nothofaginea** var. **carminea** Singer, *Beih. Nova Hedwigia* **29**: 353, 1969.

Dist: TF

Ref: Horak (1980), Singer (1969), Singer & Digilio (1952).

**Russula pectinatoides** Peck, *Rep. (Annual) New York State Mus. Nat. Hist.* **116**: 43, 1907.

Dist: BA

Ref: Raithelhuber (1991, 2004), Singer (1953a), Singer & Digilio (1952), Wright & Albertó (2002).

**Russula puiggarii** (Speg.) Singer, *Lilloa* **23**: 239, 1950.

Bas: *Clitocybe puiggarii* Speg. (1889).

Dist: MNES

Ref: Farr (1973), Raithelhuber (1987, 1991, 2004), Singer (1950a, 1950b), Singer & Digilio (1952).

**Russula rugosella** Raithelh., *Metrodiana* **3**(1): 29, 1972.

Dist: N, RN

Ref: Raithelhuber (1977, 1987, 1990, 1991, 2004).

**Russula sanguinea** (Bull.) Fr., *Epicr. syst. mycol.(Upsaliae)*: 351, 1838 [1836-1838].

Bas: *Agaricus sanguineus* Bull., 1781.

Dist: AP

Ref: Barroetaveña (2006).

**Russula turci** Bres., *Fung. Trident.* **1**(1): 22, 1881.

Dist: BA

Ref: Wright & Albertó (2002).

**Russula wrightii** Raithelh., *Hong. Argentin.* **2**: 130, 1977.

Dist: N, RN

Ref: Raithelhuber (1977, 1987, 1991, 2004).

#### General remarks

When data were analyzed, we concluded that 54 species belonging to families *Paxillaceae*, *Gomphidiaceae*, *Boletaceae* and *Russulaceae* were recorded. All of them are distributed in 16 genera, the most important being *Russula* (19 species), *Paxillus* (7), and *Lactarius* (6). The rest of the genera had only a few species recorded (1-3).

### Acknowledgments

The authors wish to thank Drs. R. E. Halling, R. M. Borges da Silveira and V. G. Cortez for the critical revision of the manuscript. We also thank authorities of PROPLAME-PRHIDEB (CONICET) to allow us to work in the library of mycology of The Facultad de Ciencias Exactas y Naturales, University of Buenos Aires. We also want to express our gratitude to Laura del Busto who helped us with books and Journals search. This research was made possible by the support of the Argentine Nat'l Research Council (CONICET).

### Literature cited

- Barroetaveña C. 2006. Hongos asociados a las plantaciones forestales de la región Andino Patagónica. Manual N°6. Esquel Centro Forestal CIEFAP.
- Becerra A, Beenken L, Pritsch K, Daniele G, Schloter M, Agerer R. 2005a. Anatomical and molecular characterization of *Lactarius* aff. *omphaliformis*, *Russula alnijorullensis* and *Cortinarius tucumanensis* ectomycorrhizae on *Alnus acuminata*. *Mycologia* 97(5): 1047–1057. <http://dx.doi.org/10.3852/mycologia.97.5.1047>
- Becerra A, Nouhra E, Daniele G, Domínguez L, McKay D. 2005b. Ectomycorrhizas of *Cortinarius helodes* and *Gyrodon monticola* with *Alnus acuminata* from Argentina. *Mycorrhiza* 15:7–15. <http://dx.doi.org/10.1007/s00572-003-0278-x>
- Bresinsky A, Jarosch M, Fischer M, Schönberger I, Wittmann-Bresinsky B. 1999. Phylogenetic relationships within *Paxillus* s.l. (*Basidiomycetes*, *Boletales*): separation of a southern hemisphere genus. *Pl. Biol. (Stuttgart)* 1(3): 327–333. <http://dx.doi.org/10.1111/j.1438-8677.1999.tb00260.x>
- Farr M.L. 1973. An annotated list of Spegazzini's fungus taxa. *Biblioth. Mycol.* 35(2): 1–1620.
- Gamundi I, Horak E. 2002. Hongos de los bosques Andino-patagónicos. Guía para el reconocimiento de las especies más comunes y atractivas. Buenos Aires, Vazquez Mazzini Editores.
- Horak E. 1967. Fungi austroamerici IV. Revisión de los hongos superiores de Tierra del Fuego o Patagonia en el Herbario de C. Spegazzini en La Plata. *Darwiniana* 14 (2–3): 355–385.
- Horak E. 1980 [1979]. Fungi *Basidiomycetes*. *Agaricales* y *Gasteromycetes* secotioides. *Flora Criptogámica de Tierra del Fuego* 11(6): 1–528.
- Kirk PM, Cannon PF, Minter DW, Stalpers JA (eds). 2008. *Ainsworth & Bisby's. Dictionary of the fungi*. 10<sup>th</sup> edition. Wallingford. CABI Publishing.
- Deschamps J, Moreno G. 1999. *Phlebopus bruchii* (*Boletales*): an edible fungus from Argentina with possible commercial value. *Mycotaxon* 72: 205–213.
- Niveiro N, Popoff OF, Albertó EO. 2009. Hongos comestibles silvestres: presencia de especies exóticas de *Suillus* (*Boletales*, *Basidiomycota*) y *Lactarius* (*Russulales*, *Basidiomycota*) asociadas a los cultivos de *Pinus elliottii* del Nordeste Argentino. *Bonplandia* 18(1):65–71.
- Niveiro N, Albertó EO. 2012a. Checklist of the argentinean *Agaricales* 1. *Amanitaceae*, *Pluteaceae*, and *Hygrophoraceae*. *Mycotaxon* 119: 493. Full article 24 p. <http://dx.doi.org/10.5248/119.493>.
- Niveiro N, Albertó EO. 2012b. Checklist of the argentinean *Agaricales* 2. *Coprinaceae* and *Strophariaceae*. *Mycotaxon* 120: 505. Full article 38 p. <http://dx.doi.org/10.5248/119.505>.
- Niveiro N, Albertó EO. 2012c. Checklist of the argentinean *Agaricales* 3. *Bolbitaceae* and *Crepidotaceae*. *Mycotaxon* 120: 505. Full article 28 p. <http://dx.doi.org/10.5248/119.505>.
- Niveiro N & Albertó EO. 2012d. Checklist of the argentinean *Agaricales* 4. *Tricholomataceae*. *Mycotaxon* 121: 499. Full article 97 p. <http://dx.doi.org/10.5248/121.499>.
- Niveiro N, Albertó EO. 2013a. Checklist of the argentinean *Agaricales* 5. *Agaricaceae*. *Mycotaxon* 122: 491. Full article 25 p. <http://dx.doi.org/10.5248/122.491>
- Raitelhuber J. 1972. Lateinische kurzdiagnosen der auf der dreilandertagung in neubulach vorgestellten Pilzarten aus Argentinien. *Metrodiana* 3(1): 95–97.
- Raitelhuber J. 1974. Hongos argentinos I. Buenos Aires, Compañía Impresora Argentina.
- Raitelhuber J. 1977. Hongos argentinos II. Buenos Aires, Compañía Impresora Argentina.
- Raitelhuber J. 1983. Über die nomenklatur einiger argentinischer blätterpilze. *Metrodiana*, Sonderh. 2: 1–24.
- Raitelhuber J. 1987. *Flora mycologica Argentina*. Hongos I. Stuttgart. Mycosur.

- Raithelhuber J. 1988. Flora mycologica Argentina. Hongos II. Stuttgart. Mycosur.
- Raithelhuber J. 1990. Diagnoses fungorum et combinationes novae. *Metrodiana*, Sonderh. 4: 5–22.
- Raithelhuber J. 1991. Flora mycologica Argentina. Hongos III. Stuttgart. Mycosur.
- Raithelhuber, J. 2004. Nueva flora micológica Argentina. Stuttgart. Mycosur.
- Ramarodi EA. 1985. Flora micológica de Bahía Blanca y zona. 2 parte. *Metrodiana* 11(2): 51–52.
- Singer R. 1950a. Type studies on *Basidiomycetes* IV. *Lilloa* 23: 147–246.
- Singer R. 1950b. Les Russules de l'Argentine. *Rev. Mycol. (Paris)* 15: 125–137.
- Singer R. 1950c. Die hoheren pilze argentinienens. *Bulletin Suisse de Mycologie* 28(1): 181–196.
- Singer R. 1953a. Type studies on *Basidiomycetes* VI. *Lilloa* 26: 57–159.
- Singer R. 1953b. Four years of mycological work in southern South America. *Mycologia* 45(6): 865–891
- Singer R. 1954. *Agaricales* von Nahuel Huapi. *Sydowia* 8: 100–157.
- Singer R. 1959. New and interesting species of *Basidiomycetes* VI. *Mycologia* 51(3): 375–400. <http://dx.doi.org/10.2307/3756058>
- Singer R. 1964. Bolets and related groups in South America. Monograph of South American *Basidiomycetes* especially those of the east slope of the Andes and Brasil VI. The families *Paxillaceae*, *Gomphidaceae*, *Boletaceae*, and *Strobilomycetaceae*. *Nova Hedwigia* 7(1–2): 93–132.
- Singer R. 1969. Mycoflora australis. *Beih. Nova Hedwigia* 29: 1–405.
- Singer R. 1973. Diagnoses fungorum novorum agaricalium III. *Beih. Sydowia* 7: 1–106
- Singer R. 1986. The *Agaricales* in modern taxonomy. 4th ed. Koenigstein. Koeltz Scientific Books.
- Singer R, Digilio APL. 1952 [1951]. Pródromo de la flora agaricina Argentina. *Lilloa* 25: 6–461.
- Singer R, Digilio APL. 1957. Las Boletáceas austrosudamericanas. *Lilloa* 28: 247–268.
- Singer R, Digilio APL. 1960. Las Boletáceas de Sudamérica tropical. *Lilloa* 30: 141–164.
- Spegazzini C. 1887. Fungi fuegiani. *Bol. Acad. Nac. Ci. Republ. Argent.* 11: 135–308.
- Spegazzini C. 1899 [1898]. Fungi argentinini novi v. critici. *Anales Mus. Nac. Buenos Aires* 6: 6–365.
- Spegazzini C. 1902. Mycetes argentinenses. II. *Anales Mus. Nac. Buenos Aires* 8: 49–89.
- Spegazzini C. 1909. Mycetes argentinenses. IV. *Anales Mus. Nac. Buenos Aires* 19: 257–458.
- Spegazzini C. 1912. Mycetes argentinenses. VI. *Anales Mus. Nac. Buenos Aires* 23: 167–244.
- Spegazzini C. 1922. Cryptogamae nonnullae fuegiana. *Anales Soc. Ci. Argent.* 94: 59–85.
- Spegazzini C. 1926a. Contribución al conocimiento de la flora micológica de las Sierras de Córdoba. *Bol. Acad. Ci. (Córdoba)* 29: 113–190.
- Spegazzini C. 1926b. Observaciones y adiciones a la micología argentina. *Bol. Acad. Ci. (Córdoba)* 28(3/4): 267–351.
- Wright JE, Albertó E. 2002. Guía de los hongos de la región Pampeana. I. Hongos con laminillas. Buenos Aires, L.O.L.A.
- Wright JE, Albertó E. 2006. Guía de los hongos de la región Pampeana. II. Hongos sin laminillas. Buenos Aires, L.O.L.A.
- Wright JE, Lechner BE, Popoff OF. 2008. Hongos. Atlas pictórico del Parque Nacional Iguazú. Buenos Aires, L.O.L.A.
- Wright JE, Wright E. 2005. Checklist of the mycobiota of Iguazu National Park (Misiones, Argentina). *Bol. Soc. Argent. Bot.* 40(1–2): 23–44.