(1686) Proposal to conserve the name *Cryphonectria* (*Diaporthales*) with a conserved type

Marieka Gryzenhout[1], Hugh F. Glen[2], Brenda D. Wingfield[3] & Michael J. Wingfield[1]

[1] *Department of Microbiology and Plant Pathology, [3]Department of Genetics, Forestry and Agricultural Biotechnology Institute (FABI), University of Pretoria, Pretoria 0002, South Africa. marieka.gryzenhout@fabi.up.ac.za (author of correspondence), Brenda.Wingfield@fabi.up.ac.za, Mike.Wingfield@fabi.up.ac.za.*

[2] *National Botanical Institute, KwaZulu-Natal Herbarium, P.O. Box 52099, Berea Road, Durban 4007, South Africa. glenh@nbidbn.co.za.*

(1686) ***Cryphonectria*** (Sacc.) Sacc. in Sylloge Fungorum 17: 783. 1905, *nom. cons. prop.*
Typus: *C. parasitica* (Murrill) M. E. Barr (*Diaporthe parasitica* Murrill), *typ. cons. prop.*

The typification of *Cryphonectria* is problematic because the widely accepted choice of *C. gyrosa* (Berk. & Broome) Sacc. as type of the name is not in accord with Art. 7.4 of the *ICBN* (Greuter & al., Regnum Veg. 138. 2000). *Cryphonectria* was first described as a subgenus of *Nectria* (Fr.) Fr. in 1883 by Saccardo (Syll. Fung. 2: 507. 1883), with two species, *N. abscondita* Sacc. and *N. variicolor* Fuckel, included in this group. Saccardo (in Saccardo & Saccardo, Syll. Fung. 17: 780–781. 1905) raised the subgenus to generic level as *Cryphonectria* (Sacc.) Sacc., including the aforementioned two species as well as *C. gyrosa* (Berk. & Broome) Sacc., *C. moriformis* (Starbäck) Sacc., *C. caraganae* (Höhn.) Sacc. and *C. xanthostroma* (Penz. & Sacc.) Sacc. Saccardo (l.c., 1905) did not designate a type for *Cryphonectria* but placed *C. gyrosa* first. Von Höhnel (Fragmente zur Mykologie 118: 1479–1481. 1909) designated *C. gyrosa* as the lectotype of *Cryphonectria* specifically because it had been placed first in the list of species recognised by Saccardo & Saccardo (l.c.) ("Als Typus…muß die zuerst angeführte Art… aufgestellt wurden"). This selection is evidently mechanical (Art. 10.5 (b) and *Ex. 7 of the *ICBN*, Greuter & al., l.c.). Furthermore, it is also incorrect because the species selected was not one of the two original members of *Nectria* subgen. *Cryphonectria* Sacc. When Barr (Mycol. Mem. no. 7: 143. 1978) accepted *C. gyrosa* as the type, she did not treat the two original species of *Nectria* subgen. *Cryphonectria*, namely *N. variicolor* and *N. abscondita*.

Neither of the two original species of *Nectria* subgen. *Cryphonectria* has been examined in recent years. Indeed the type material of *C. abscondita* (Sacc.) Sacc. (PAD, *Wisteria sinensis*) does not contain structures that could be used in morphological studies. The morphology and generic placement of this fungus is thus unknown. Fruiting structures on the type specimens, G 843, FH 843 and B (*Salix triandra* Oestrich), of *C. variicolor* (Fuckel) Sacc. do not resemble those for *Cryphonectria* species or any other member of *Diaporthales*, since the ascomata are not stromatic and the perithecia are minute, globose, orange and superficial with striated ascospores. Since the appropriate placement of *C. abscondita* is unknown and *C. variicolor* does not reside in *Diaporthales*, they are best viewed as taxa of uncertain position and unsuitable as sources of a type. As these are, however, the only candidates for the type of *Cryphonectria*, it is, therefore, appropriate (Art. 48 note 2) to propose that the name be conserved with a new type.

Results of a recent taxonomic study (Gryzenhout & al., in Taxon: in press. 2005) demonstrate that *C. gyrosa* (Barr, in Mycol. Mem. no. 7: 143. 1978), widely, though incorrectly, cited as the type of *Cryphonectria*, is generically distinct from most species currently included in *Cryphonectria*. Furthermore, *C. gyrosa* (K 109807, K 109809, BPI 614797) and its recently recognized allies from New Zealand differ in important characters (cf. Art. 9.17 of the *Code*) from those in the original description of the genus by Saccardo & Saccardo (l.c.). A separate clade (Myburg & al., in Mycologia: 96: 990–1001. 2004) that includes *C. gyrosa* and a new New Zealand species, is being described as a new genus (Gryzenhout & al., l.c.). It would not, therefore, be appropriate to establish *C. gyrosa* as type of *Cryphonectria* by conservation.

By contrast, the proposed type, *C. parasitica* (Murrill) M. E. Barr (in Mycol. Mem. no. 7: 143. 1978) based on *Diaporthe parasitica* Murrill (Torreya 6: 189. 1906), falls within the phylogenetic clade that includes most species of the genus as currently understood (Myburg & al., l.c.). *Cryphonectria parasitica* is one of the most important forest pathogens and has been the subject of intensive studies by scientists including forest pathologists as well as chestnut growers. The name *Cryphonectria* has also been assigned to three important hypoviruses that infect *C. parasitica*, and the condition of reduced virulence caused by these viruses has been most widely studied in *C. parasitica* by virologists and scientists outside plant pathology and mycology. *Cryphonectria parasitica* has been thoroughly characterised based on its phylogenetic relationships and world-wide population structure. Furthermore, ample isolates and herbarium specimens exist for this species, although none of the isolates are directly linked to the type specimen (NY, *Castanea dentata*, Bronx Park, New York, U.S.A., 1905, coll. W. A. Murrill). Its morphological characteristics correspond with those traditionally defined for the genus, and it can thus be chosen instead of one of the alternatives, *C. abscondita* or *C. variicolor*, as type (Art.

10.5). Conservation of *Cryphonectria* with *C. parasitica* as type is also strongly justified by the importance of this fungus. Conserving *Cryphonectria* in this way would restrict the usage of the name *Cryphonectria* (Ex. 9 Art. 14.9) to this fungus and close relatives, thus avoiding future changes of its name.

Acknowledgements

We thank Dr. Walter Gams from the Centraalbureau voor Schimmelcultures (CBS), Utrecht, The Netherlands, and Dr. John McNeill from the Royal Botanic Garden, Edinburgh, Scotland, for their substantial advice on nomenclatural issues and for assisting us in revising this manuscript. We are grateful to the herbaria mentioned, for the loan of specimens. We also acknowledge the financial support of the National Research Foundation, members of the Tree Protection Co-operative Programme, and the THRIP initiative of the Department of Trade and Industry, South Africa.