



Ten new species of lichenized Basidiomycota in the genera *Dictyonema* and *Cora* (Agaricales: Hygrophoraceae), with a key to all accepted genera and species in the *Dictyonema* clade

ROBERT LÜCKING¹, MANUELA DAL-FORNO², JAMES D. LAWREY², FRANK BUNGARTZ³, MARÍA E. HOLGADO ROJAS⁴, JESÚS E. HERNÁNDEZ M.⁵, MARCELO P. MARCELLI⁶, BIBIANA MONCADA⁷, EDUARDO A. MORALES⁸, MATTHEW P. NELSEN^{1,9}, ELIAS PAZ¹⁰, LUIS SALCEDO¹¹, ADRIANO A. SPIELMANN¹², KARINA WILK¹³, SUSAN WILL-WOLF¹⁴ & ALBA YÁNEZ-AYABACA³

¹*Integrative Science and Collections, The Field Museum, 1400 South Lake Shore Drive, Chicago, Illinois 60605, U.S.A.; email: rlucking@fieldmuseum.org*

²*Department of Environmental Science and Policy, George Mason University, 4400 University Drive, Fairfax, VA 22030-4444, U.S.A.*

³*Biodiversity Assessment, Charles Darwin Foundation (AISBL), Puerto Ayora, Santa Cruz, Galápagos, Ecuador*

⁴*Facultad de Ciencias Biológicas, Universidad Nacional de San Antonio Abad del Cusco, Av. de la Cultura, Nro. 733, Cusco, Perú*

⁵*Fundación Instituto Botánico de Venezuela, División de Plantas no Vasculares, Sección Hongos y Líquenes, Ave. Salvador Allende, Jardín Botánico de Caracas, Universidad Central de Venezuela, Apartado # 2156, Caracas 1010-A, Venezuela*

⁶*Instituto de Botânica, Núcleo de Pesquisa em Micologia, Caixa Postal 68041, São Paulo/SP, CEP 04045-972, Brazil*

⁷*Licenciatura en Biología, Universidad Distrital Francisco José de Caldas, Cra. 4 No. 26B-54, Torre de Laboratorios, Herbario, Bogotá, Colombia*

⁸*Herbario Criptogámico, Universidad Católica Boliviana San Pablo, Calle M. Márquez esq. Plaza Jorge Trigo s/n, P.O. Box 5381, Cochabamba, Bolivia*

⁹*Committee on Evolutionary Biology, University of Chicago, 1025 E. 57th Street, Chicago, Illinois 60637, U.S.A.*

¹⁰*Facultad de Ciencias Biológicas, Universidad Nacional de San Antonio Abad del Cusco, Av. de la Cultura, Nro. 733, Cusco, Perú*

¹¹*Laboratorio de Ecofisiología Vegetal, Facultad de Ciencias Naturales y Matemática, Universidad Nacional Federico Villarreal, Lima, Perú*

¹²*Laboratório de Botânica, Departamento de Biologia, Centro de Ciências Biológicas e da Saúde, Universidade Federal de Mato Grosso do Sul, Cidade Universitária, Caixa Postal 549, CEP 79070-900, Campo Grande, Mato Grosso do Sul, Brazil*

¹³*Laboratory of Lichenology, W. Szafer Institute of Botany, Polish Academy of Sciences, Lubicz 46, PL-31-512 Kraków, Poland*

¹⁴*Department of Botany, University of Wisconsin-Madison, 430 Lincoln Dr., Madison, Wisconsin 53706, U.S.A.*

Abstract

As part of a larger systematic and taxonomic revision, including molecular phylogenetic analysis, of lichenized Basidiomycota in the *Dictyonema* clade, ten species are described as new from tropical America, seven in the foliose genus *Cora* and three in the filamentous genus *Dictyonema*: *Cora arachnoidea* J. E. Hern. & Lücking, *sp. nov.*, *C. aspera* Wilk, Lücking & E. Morales, *sp. nov.*, *C. byssoidea* Lücking & Moncada, *sp. nov.*, *C. cyphellifera* Dal-Forno, Bungartz & Lücking, *sp. nov.*, *C. inversa* Lücking & Moncada, *sp. nov.*, *C. squamiformis* Wilk, Lücking & Yánez-Ayabaca, *sp. nov.*, *C. strigosa* Lücking, E. Paz & L. Salcedo, *sp. nov.*, *Dictyonema aeruginosulum* Lücking, Nelsen & Will-Wolf, *sp. nov.*, *D. diducens* Nyl. ex Lücking, *sp. nov.*, *D. metallicum* Lücking, Dal-Forno & Lawrey, *sp. nov.*, and *D. obscuratum* Lücking, Spielmann & Marcelli, *sp. nov.* We discuss the taxonomic status of the six names historically established for species belonging in the genus *Cora* and reinstate the names *C. gyrolophia* Fr., *C. pavonia* (Sw.) Fr., and *C. reticulifera* Vain., providing diagnostic features for these, whereas the status of *C. glabrata* (Spreng.) Fr. and *C. bovei* Speg. remains uncertain. The following new combinations are introduced: *Cora hirsuta* (Moncada & Lücking) Moncada & Lücking, *comb. nov.*, *C. minor* (Lücking, E. Navarro & Sipman) Lücking, *comb. nov.*, *Corella melvinii* (Chaves, Lücking & Umaña) Lücking, Dal-Forno & Lawrey, *comb. nov.*, *Cyphellostereum phyllogenum* (Müll. Arg.) Lücking, Dal-Forno & Lawrey, *comb. nov.*, *Dictyonema caespitosum* (Johow) Lücking, *comb. nov.*, *D. irrigatum* (Berk. & M. A. Curtis) Lücking, *comb. nov.*, *D. phyllophilum* (Parmasto) Lücking, Dal-Forno & Lawrey, *comb. et stat. nov.*, and *D. scabridum* (Vain.) Lücking, *comb. et stat. nov.* Keys are presented to the five currently accepted genera and 40 currently recognized species in the genera *Cyphellostereum*, *Dictyonema*, *Cora*, and *Corella*.