**Inferring hypothesis-based transitions in clade-specific models of chromosome number evolution along phylogenies**

J.I. Márquez-Corro, S. Martín-Bravo, D. Spalink,M. Luceño & M. Escudero

**Appendix B** – Calibrations for Cyperaceae phylogeny (Table B.1) and list of haploid chromosome number used in the analysis (Table B.2).

**Table B.1.** Calibrations use in the treePL (Smith and O’Meara 2012) configuration file.

|  |  |  |  |
| --- | --- | --- | --- |
| Clade | **Fossil** | **Calibration**  **(min – max Ma)** | **Literature** |
| Root |  | 93 – 100 | Spalink et al. (2016)\* |
| Cyperaceae |  | 84 – 92 | Spalink et al. (2018)\* |
| *Carex* | *Carex colwellensis* | 34 – 38 | Jiménez-Mejías et al. (2016) |
| *Carex* Vignea clade | *Carex marchica* | 16 – 23 | Jiménez-Mejías et al. (2016) |
| Core *Carex* | *Carex hartauensis* | 23 – 28 | Jiménez-Mejías et al. (2016) |
| *Cyperus* |  | 24 – 32 | Spalink et al. (2016)\* |
| *Eleocharis* |  | 31 – 41 | Spalink et al. (2016)\* |
| *Fimbristylis* |  | 30 – 40 | Smith et al. (2010) |
| *Rhynchospora* |  | 40 – 50 | Spalink et al. (2016)\* |
| *Scirpus* |  | 28 – 38 | Smith et al. (2010) |
| *Scleria* |  | 38 – 48 | Smith et al. (2010) |

\*This literature corresponds to secondary calibrations.

|  |  |
| --- | --- |
| Table B.2. List of species represented on the studied phylogenies with the chromosome number used for analysis. Chromosome data obtained from Chromosome Counts Database (Rice *et al.*, 2015), except for species with superscripts. | |
| Taxa | **Chromosome** **number (n)** |
| *Actinoscirpus grossus* | 41 |
| *Blysmus compressus* | 22 |
| *Blysmus rufus* | 20 |
| *Bolboschoenus fluviatilis* | 47 |
| *Bolboschoenus maritimus* | 20 |
| *Bolboschoenus planiculmis* | 28 |
| *Bolboschoenus robustus* | 53 |
| *Bulbostylis barbata* | 5 |
| *Bulbostylis capillaris* | 36 |
| *Bulbostylis ciliatifolia* | 30 |
| *Bulbostylis densa* | 32 |
| *Bulbostylis funckii* | 10 |
| *Bulbostylis hispidula* | 5 |
| *Bulbostylis juncoides* | 42 |
| *Bulbostylis stenophylla* | 15 |
| *Bulbostylis warei* | 15 |
| *Calyptrocarya glomerulata* | 10‡ |
| *Carex abrupta* | 38 |
| *Carex abscondita* | 24 |
| *Carex acaulis* | 25 |
| *Carex acidicola* | 25 |
| *Carex acuta* | 42 |
| *Carex acutiformis* | 19 |
| *Carex adelostoma* | 53 |
| *Carex adusta* | 39 |
| *Carex aestivalis* | 28 |
| *Carex aethiopica* | 37 |
| *Carex aggregata* | 26 |
| *Carex alata* | 37 |
| *Carex alatauensis* | 40 |
| *Carex alba* | 27 |
| *Carex albata* | 54 |
| *Carex albicans* | 18 |
| *Carex albolutescens* | 32 |
| *Carex albonigra* | 26 |
| *Carex albursina* | 22 |
| *Carex alopecoidea* | 25 |
| *Carex alopecuroides* | 31 |
| *Carex amphibola* | 28 |
| *Carex angustata* | 34 |
| *Carex annectens* | 25 |
| *Carex anthoxanthea* | 27 |
| *Carex aperta* | 27 |
| *Carex appalachica* | 26 |
| *Carex appendiculata* | 39 |
| *Carex appressa* | 30 |
| *Carex appropinquata* | 32 |
| *Carex aquatilis* | 38 |
| *Carex arcta* | 30 |
| *Carex arctata* | 27 |
| *Carex arctiformis* | 28 |
| *Carex arenaria* | 29 |
| *Carex argyrantha* | 40 |
| *Carex arnellii* | 20 |
| *Carex assiniboinensis* | 16 |
| *Carex astricta* | 44 |
| *Carex asturica* | 23 |
| *Carex asynchrona* | 26 |
| *Carex aterrima* subsp. *medwedewii* | 16 |
| *Carex atherodes* | 37 |
| *Carex athrostachya* | 34 |
| *Carex atlantica* | 22 |
| *Carex atrata* | 27 |
| *Carex atratiformis* | 27 |
| *Carex atrofusca* | 19 |
| *Carex aucklandica* | 44 |
| *Carex augustinowiczii* | 33 |
| *Carex aurea* | 26 |
| *Carex austroalpina* | 20 |
| *Carex austrocaroliniana* | 29 |
| *Carex austrocompacta* | 44 |
| *Carex baccans* | 23 |
| *Carex backii* | 33 |
| *Carex baldensis* | 45 |
| *Carex banksiana* | 44 |
| *Carex bebbii* | 34 |
| *Carex bella* | 20 |
| *Carex bequaertii* | 29 |
| *Carex bicknellii* | 38 |
| *Carex bicolor* | 26 |
| *Carex bigelowii* | 35 |
| *Carex binervis* | 37 |
| *Carex blanda* | 19 |
| *Carex blepharicarpa* | 15 |
| *Carex bohemica* | 40 |
| *Carex bolanderi* | 25 |
| *Carex bonanzensis* | 25 |
| *Carex bonatiana* | 25 |
| *Carex borbonica* | 34 |
| *Carex borealipolaris* | 29 |
| *Carex boryana* | 34 |
| *Carex bostrychostigma* | 22 |
| *Carex brevicollis* | 28 |
| *Carex breviculmis* var. *fibrillosa* | 34 |
| *Carex brevior* | 30 |
| *Carex brizoides* | 29 |
| *Carex bromoides* | 33 |
| *Carex brunnea* | 31 |
| *Carex brunnescens* | 28 |
| *Carex brunnescens* subsp. *sphaerostachya* | 28 |
| *Carex brysonii* | 25 |
| *Carex buekii* | 20 |
| *Carex bulbostylis* | 27 |
| *Carex bushii* | 26 |
| *Carex buxbaumii* | 50 |
| *Carex calcifugens* | 26 |
| *Carex calcis* | 34 |
| *Carex camposii* | 36 |
| *Carex canariensis* | 29 |
| *Carex canescens* | 28 |
| *Carex capensis* | 18\* |
| *Carex capillaris* | 9 |
| *Carex capitata* | 25 |
| *Carex careyana* | 34 |
| *Carex caroliniana* | 24 |
| *Carex caryophyllea* | 33 |
| *Carex castanea* | 22 |
| *Carex castroviejoi* | 31 |
| *Carex caucasica* | 26 |
| *Carex caudata* | 12 |
| *Carex cephaloidea* | 25 |
| *Carex cephalophora* | 24 |
| *Carex cercostachys* | 32 |
| *Carex cespitosa* | 40 |
| *Carex chordorrhiza* | 30 |
| *Carex colchica* | 29 |
| *Carex communis* | 14 |
| *Carex comosa* | 32 |
| *Carex conferta* | 26 |
| *Carex conjuncta* | 23 |
| *Carex conoidea* | 34 |
| *Carex corrugata* | 29 |
| *Carex corynoidea* | 44 |
| *Carex crawei* | 29 |
| *Carex crawfordii* | 34 |
| *Carex crebriflora* | 21 |
| *Carex cretica* | 29 |
| *Carex crinita* | 33 |
| *Carex crispa* | 44 |
| *Carex cristatella* | 35 |
| *Carex cruciata* | 21 |
| *Carex cruenta* | 22 |
| *Carex crus-corvi* | 26 |
| *Carex cryptolepis* | 32 |
| *Carex cumberlandensis* | 23 |
| *Carex cumulata* | 29 |
| *Carex curaica* | 32 |
| *Carex curatorum* | 31 |
| *Carex curvula* | 43 |
| *Carex cusickii* | 31 |
| *Carex cyanea* | 44 |
| *Carex dacica* | 40 |
| *Carex davalliana* | 23 |
| *Carex davyi* | 37 |
| *Carex deasyi* | 16 |
| *Carex debilis* | 30 |
| *Carex decomposita* | 32 |
| *Carex deflexa* | 12 |
| *Carex delicata* | 29 |
| *Carex demissa* | 35 |
| *Carex densa* | 27 |
| *Carex depauperata* | 22 |
| *Carex depressa* | 32 |
| *Carex derelicta* | 35 |
| *Carex deweyana* | 27 |
| *Carex diandra* | 30 |
| *Carex digitata* | 26 |
| *Carex diluta* | 28 |
| *Carex dioica* | 26 |
| *Carex disperma* | 35 |
| *Carex distachya* | 37 |
| *Carex distans* | 37 |
| *Carex disticha* | 31 |
| *Carex disticha* subsp. *lithophila* | 31 |
| *Carex divisa* | 30 |
| *Carex divulsa* | 29 |
| *Carex doniana* | 31 |
| *Carex drucei* | 44 |
| *Carex durieui* | 26 |
| *Carex duriuscula* | 30 |
| *Carex ebenea* | 42 |
| *Carex eburnea* | 27 |
| *Carex echinata* | 29 |
| *Carex echinochloe* | 21 |
| *Carex echinodes* | 38 |
| *Carex ecklonii* | 32 |
| *Carex edura* | 44 |
| *Carex edwardsiana* | 26 |
| *Carex egmontiana* | 44 |
| *Carex elata* | 38 |
| *Carex eleusinoides* | 42 |
| *Carex elongata* | 28 |
| *Carex emoryi* | 36 |
| *Carex erebus* | 44 |
| *Carex ericetorum* | 15 |
| *Carex erythrovaginata* | 44 |
| *Carex esenbeckii* | 33 |
| *Carex exilis* | 31 |
| *Carex extensa* | 30 |
| *Carex fedia* | 47 |
| *Carex ferruginea* | 29 |
| *Carex festucacea* | 35 |
| *Carex feta* | 33 |
| *Carex filicina* | 21 |
| *Carex filifolia* | 25 |
| *Carex filipes* | 19 |
| *Carex fimbriata* | 21 |
| *Carex firma* | 17 |
| *Carex fischeri* | 35 |
| *Carex fissirostris* | 36 |
| *Carex flacca* subsp. *flacca* | 19 |
| *Carex flaccosperma* | 23 |
| *Carex flava* | 30 |
| *Carex foenea* | 41 |
| *Carex foetida* | 29 |
| *Carex folliculata* | 28 |
| *Carex formosa* | 26 |
| *Carex forsteri* | 30 |
| *Carex fracta* | 35 |
| *Carex frankii* | 40 |
| *Carex frigida* | 28 |
| *Carex fritschii* | 15 |
| *Carex fuliginosa* | 20 |
| *Carex furva* | 30 |
| *Carex fuscula* | 33 |
| *Carex garberi* | 26 |
| *Carex gholsonii* | 18 |
| *Carex gibba* | 17 |
| *Carex gifuensis* | 21 |
| *Carex glacialis* | 17 |
| *Carex glareosa* | 33 |
| *Carex glaucodea* | 22 |
| *Carex gmelinii* | 31 |
| *Carex godfreyi* | 25 |
| *Carex gracilior* | 42 |
| *Carex gracillima* | 26 |
| *Carex grandiligulata* | 6 |
| *Carex granularis* | 20 |
| *Carex gravida* | 24 |
| *Carex grayi* | 26 |
| *Carex grioletii* | 24 |
| *Carex grisea* | 28 |
| *Carex gynandra* | 34 |
| *Carex gynocrates* | 24 |
| *Carex gynodynama* | 25 |
| *Carex halleriana* | 25 |
| *Carex hallii* | 27 |
| *Carex harfordii* | 40 |
| *Carex hartmanii* | 34 |
| *Carex haydeniana* | 41 |
| *Carex haydenii* | 27 |
| *Carex healyi* | 44 |
| *Carex heleonastes* | 28 |
| *Carex helodes* | 36 |
| *Carex hirsutella* | 26 |
| *Carex hirta* | 56 |
| *Carex hirtifolia* | 25 |
| *Carex hirtissima* | 35 |
| *Carex hispida* | 19 |
| *Carex hitchcockiana* | 27 |
| *Carex hochstetteriana* | 38 |
| *Carex holostoma* | 30 |
| *Carex hoodii* | 30 |
| *Carex hookeriana* | 29 |
| *Carex hordeistichos* | 28 |
| *Carex horizontalis* | 44 |
| *Carex hormathodes* | 37 |
| *Carex hostiana* | 28 |
| *Carex houghtoniana* | 28 |
| *Carex humilis* var. *nana* | 19 |
| *Carex hyalina* | 37 |
| *Carex hystericina* | 29 |
| *Carex idaea* | 37 |
| *Carex illota* | 32 |
| *Carex imbecilla* | 44 |
| *Carex impressinervia* | 23 |
| *Carex inanis* | 21 |
| *Carex infirminervia* | 23 |
| *Carex infuscata* | 27 |
| *Carex inops* | 18 |
| *Carex integra* | 41 |
| *Carex interior* | 27 |
| *Carex interrupta* | 32 |
| *Carex intumescens* | 24 |
| *Carex ischnostachya* | 31 |
| *Carex jamesii* | 33 |
| *Carex killickii* | 36 |
| *Carex kirkii* | 34 |
| *Carex kitaibeliana* | 18 |
| *Carex kobomugi* | 42 |
| *Carex krausei* | 18 |
| *Carex lachenalii* | 32 |
| *Carex lacustris* | 37 |
| *Carex laeviconica* | 55 |
| *Carex laeviculmis* | 28 |
| *Carex laevigata* | 37 |
| *Carex laevivaginata* | 25 |
| *Carex lainzii* | 34 |
| *Carex lancea* | 44 |
| *Carex lapponica* | 28 |
| *Carex lasiocarpa* | 28 |
| *Carex latebracteata* | 49 |
| *Carex laxa* | 29 |
| *Carex laxiculmis* | 23 |
| *Carex laxiflora* | 20 |
| *Carex leavenworthii* | 24 |
| *Carex ledebouriana* | 28 |
| *Carex leersii* | 29 |
| *Carex leiorhyncha* | 39 |
| *Carex lenticularis* | 34 |
| *Carex lepidocarpa* | 34 |
| *Carex lepidocarpa* subsp. *nevadensis* | 34 |
| *Carex leporina* | 33 |
| *Carex leporinella* | 41 |
| *Carex leptalea* | 26 |
| *Carex leptonervia* | 18 |
| *Carex leptopoda* | 27 |
| *Carex limosa* | 32 |
| *Carex lingii* | 6 |
| *Carex liparocarpos* | 19 |
| *Carex livida* | 16 |
| *Carex loliacea* | 27 |
| *Carex longifructus* | 44 |
| *Carex longii* | 30 |
| *Carex lowei* | 38 |
| *Carex lucorum* | 20 |
| *Carex ludwigii* | 17 |
| *Carex lupuliformis* | 30 |
| *Carex lupulina* | 28 |
| *Carex lurida* | 32 |
| *Carex lyngbyei* | 36 |
| *Carex maackii* | 33 |
| *Carex mackenziei* | 32 |
| *Carex macloviana* | 43 |
| *Carex macrandrolepis* | 37 |
| *Carex macrocephala* | 37 |
| *Carex macrochaeta* | 30 |
| *Carex macrolepis* | 18 |
| *Carex macroprophylla* | 30 |
| *Carex magellanica* | 29 |
| *Carex mairei* | 34 |
| *Carex manhartii* | 14 |
| *Carex mannii* | 35 |
| *Carex mannii* subsp. *friesiorum* | 35 |
| *Carex marina* | 30 |
| *Carex mariposana* | 40 |
| *Carex maritima* | 30 |
| *Carex meadii* | 28 |
| *Carex media* | 28 |
| *Carex megalepis* | 44 |
| *Carex melanantha* | 24 |
| *Carex melanocarpa* | 12 |
| *Carex melanocephala* | 26 |
| *Carex melanostachya* | 27 |
| *Carex membranacea* | 37 |
| *Carex mendocinensis* | 29 |
| *Carex merritt-fernaldii* | 35 |
| *Carex mertensii* | 31 |
| *Carex mesochorea* | 24 |
| *Carex meyeriana* | 23 |
| *Carex michauxiana* | 32 |
| *Carex michelii* | 31 |
| *Carex microcarpa* | 30 |
| *Carex microchaeta* | 31 |
| *Carex microdonta* | 32 |
| *Carex microglochin* | 29 |
| *Carex micropoda* | 31 |
| *Carex microptera* | 40 |
| *Carex minor* | 44 |
| *Carex misera* | 37 |
| *Carex missouriensis* | 25 |
| *Carex mitchelliana* | 33 |
| *Carex mitrata* | 34 |
| *Carex molesta* | 34 |
| *Carex molestiformis* | 35 |
| *Carex montana* | 19 |
| *Carex mucronata* | 18 |
| *Carex muehlenbergii* | 23 |
| *Carex multicostata* | 35 |
| *Carex muricata* subsp. *muricata* | 29 |
| *Carex muskingumensis* | 40 |
| *Carex myosuroides* | 29 |
| *Carex nardina* | 34 |
| *Carex nebraskensis* | 33 |
| *Carex neesii* | 57 |
| *Carex nemostachys* | 41 |
| *Carex nemurensis* | 26 |
| *Carex nervata* | 37 |
| *Carex nervina* | 26 |
| *Carex neurocarpa* | 54 |
| *Carex nigra* | 42 |
| *Carex nigricans* | 36 |
| *Carex nigromarginata* | 17 |
| *Carex nodaeana* | 35 |
| *Carex normalis* | 34 |
| *Carex norvegica* | 28 |
| *Carex novae-angliae* | 15 |
| *Carex nubigena* | 52 |
| *Carex nudata* | 35 |
| *Carex obnupta* | 36 |
| *Carex obscura* var. *brachycarpa* | 28 |
| *Carex obtusata* | 26 |
| *Carex obtusifolia* | 44 |
| *Carex occidentalis* | 30 |
| *Carex oedipostyla* | 34 |
| *Carex olbiensis* | 23 |
| *Carex oligocarpa* | 27 |
| *Carex oligosperma* | 38 |
| *Carex opaca* | 33 |
| *Carex orbicularis* | 43 |
| *Carex ornithopoda* | 27 |
| *Carex oronensis* | 37 |
| *Carex otrubae* | 29 |
| *Carex ouachitana* | 26 |
| *Carex ozarkana* | 28 |
| *Carex pachygyna* | 6 |
| *Carex pachystachya* | 39 |
| *Carex pachystylis* | 8 |
| *Carex paeninsulae* | 24 |
| *Carex pairae* | 29 |
| *Carex paleacea* | 36 |
| *Carex pallescens* | 32 |
| *Carex pallidula* | 25 |
| *Carex panicea* | 16 |
| *Carex paniculata* | 32 |
| *Carex paniculata* subsp. *lusitanica* | 30 |
| *Carex pansa* | 29 |
| *Carex papulosa* | 22 |
| *Carex parallela* | 22 |
| *Carex parryana* | 27 |
| *Carex parviflora* | 27 |
| *Carex parvispica* | 47 |
| *Carex parvula* | 32 |
| *Carex pauciflora* | 23 |
| *Carex paulo-vargasii* | 37 |
| *Carex peckii* | 18 |
| *Carex pediformis* | 25 |
| *Carex pediformis* subsp. *macroura* | 35 |
| *Carex pedunculata* | 13 |
| *Carex pellita* | 39 |
| *Carex pendula* | 29 |
| *Carex pensylvanica* | 18 |
| *Carex peregrina* | 31 |
| *Carex perplexa* | 66 |
| *Carex perraudieriana* | 37 |
| *Carex petasata* | 37 |
| *Carex petitiana* | 35 |
| *Carex petitiana* subsp. *attenuata* | 35 |
| *Carex petricosa* | 16 |
| *Carex peucophila* | 37 |
| *Carex phacota* var. *gracilispica* | 37 |
| *Carex phaeocephala* | 42 |
| *Carex phleoides* | 48 |
| *Carex physodes* | 8 |
| *Carex pichinchensis* | 41 |
| *Carex pigra* | 28 |
| *Carex pilosa* | 22 |
| *Carex pilulifera* | 9 |
| *Carex pisiformis* | 35 |
| *Carex pisiformis* var. *sikokiana* | 34 |
| *Carex planata* | 33 |
| *Carex planispicata* | 25 |
| *Carex plantaginea* | 25 |
| *Carex platyphylla* | 35 |
| *Carex pluriflora* | 25 |
| *Carex podocarpa* | 32 |
| *Carex potens* | 44 |
| *Carex praecox* | 29 |
| *Carex praegracilis* | 30 |
| *Carex prairea* | 33 |
| *Carex praticola* | 38 |
| *Carex preslii* | 40 |
| *Carex projecta* | 32 |
| *Carex pseudobrizoides* | 29 |
| *Carex pseudocuraica* | 16 |
| *Carex pseudocyperus* | 33 |
| *Carex pseudofoetida* subsp. *afghanica* | 31 |
| *Carex pseudorufa* | 32 |
| *Carex pulicaris* | 30 |
| *Carex pumila* | 41 |
| *Carex punctata* | 34 |
| *Carex punicea* | 44 |
| *Carex purpurata* | 44 |
| *Carex purpurifera* | 18 |
| *Carex pyrenaica* | 34 |
| *Carex quadriflora* | 23 |
| *Carex radfordii* | 23 |
| *Carex radiata* | 29 |
| *Carex rainbowii* | 29 |
| *Carex ramenskii* | 40 |
| *Carex rariflora* | 26 |
| *Carex raynoldsii* | 29 |
| *Carex remota* | 31 |
| *Carex reniformis* | 40 |
| *Carex resectans* | 29 |
| *Carex retroflexa* | 20 |
| *Carex retrorsa* | 35 |
| *Carex reuteriana* | 37 |
| *Carex rhizina* subsp. *rhizina* | 35 |
| *Carex richardsonii* | 26 |
| *Carex riloensis* | 13 |
| *Carex rochebrunii* | 32 |
| *Carex rorulenta* | 24 |
| *Carex rosea* | 26 |
| *Carex rossii* | 18 |
| *Carex rostrata* | 38 |
| *Carex rotundata* | 40 |
| *Carex runssoroensis* | 25 |
| *Carex rupestris* | 25 |
| *Carex salina* | 39 |
| *Carex sartwellii* | 31 |
| *Carex saxatilis* | 40 |
| *Carex saximontana* | 32 |
| *Carex scabrata* | 27 |
| *Carex scabriuscula* | 29 |
| *Carex scaposa* | 12 |
| *Carex schimperiana* | 12 |
| *Carex schweickerdtii* | 30 |
| *Carex scirpoidea* | 31 |
| *Carex scoparia* var. *scoparia* | 33 |
| *Carex scoparia* var. *tessellata* | 34 |
| *Carex scopulorum* | 38 |
| *Carex sempervirens* subsp. *sempervirens* | 16 |
| *Carex seorsa* | 24 |
| *Carex shinnersii* | 30 |
| *Carex siccata* | 35 |
| *Carex siderosticta* | 6 |
| *Carex silicea* | 37 |
| *Carex silvestris* | 44 |
| *Carex simensis* | 35 |
| *Carex simpliciuscula* | 38 |
| *Carex simulata* | 32 |
| *Carex socialis* | 29 |
| *Carex songorica* | 41 |
| *Carex sparganioides* | 24 |
| *Carex spartea* | 15\* |
| *Carex spectabilis* | 32 |
| *Carex spicata* | 29 |
| *Carex sprengelii* | 21 |
| *Carex squarrosa* | 28 |
| *Carex stenocarpa* | 20 |
| *Carex stenophylla* | 30 |
| *Carex stipata* | 26 |
| *Carex straminea* | 37 |
| *Carex* cf. *straminiformis* | 41 |
| *Carex striatula* | 18 |
| *Carex stricta* | 34 |
| *Carex strictissima* | 44 |
| *Carex strigosa* | 33 |
| *Carex styloflexa* | 24 |
| *Carex stylosa* | 26 |
| *Carex subbracteata* | 40 |
| *Carex suberecta* | 36 |
| *Carex subfusca* | 41 |
| *Carex subspathacea* | 39 |
| *Carex subtilis* | 47 |
| *Carex subviridis* | 44 |
| *Carex supina* | 19 |
| *Carex swanii* | 27 |
| *Carex sychnocephala* | 32 |
| *Carex sylvatica* | 29 |
| *Carex tenera* | 28 |
| *Carex tenuiflora* | 29 |
| *Carex tetanica* | 28 |
| *Carex tetrastachya* | 33 |
| *Carex thornei* | 25 |
| *Carex tincta* | 37 |
| *Carex tomentosa* | 24 |
| *Carex tonsa* | 16 |
| *Carex torreyi* | 29 |
| *Carex torta* | 33 |
| *Carex trachycarpa* | 33 |
| *Carex traiziscana* | 31 |
| *Carex* cf. *triangularis* | 27 |
| *Carex tribuloides* var. *sangamonensis* | 35 |
| *Carex tribuloides* var. *tribuloides* | 35 |
| *Carex tricolor* | 31 |
| *Carex trinervis* | 42 |
| *Carex trisperma* | 30 |
| *Carex tristachya* | 21 |
| *Carex tristachya* var. *pocilliformis* | 19 |
| *Carex tristis* | 19 |
| *Carex troodi* | 34 |
| *Carex tsushimensis* | 16 |
| *Carex typhina* | 27 |
| *Carex uhligii* | 13 |
| *Carex umbellata* | 15 |
| *Carex umbricola* | 44 |
| *Carex umbrosa* subsp. *huetiana* | 33 |
| *Carex uncinata* | 44 |
| *Carex ursina* | 32 |
| *Carex ussuriensis* | 10 |
| *Carex utriculata* | 41 |
| *Carex vaginata* | 16 |
| *Carex vernacula* | 26 |
| *Carex vesicaria* | 41 |
| *Carex vexans* | 35 |
| *Carex viridula* | 34 |
| *Carex vixdentata* | 31 |
| *Carex vulpinoidea* | 26 |
| *Carex willdenowii* | 39 |
| *Carex williamsii* | 9 |
| *Carex woodii* | 22 |
| *Carex xerantica* | 34 |
| *Carex zotovii* | 44 |
| *Chrysitrix capensis* | 23‡ |
| *Cladium mariscoides* | 39 |
| *Cladium mariscus* | 18 |
| *Cyperus alopecuroides* | 23 |
| *Cyperus alternifolius* | 16 |
| *Cyperus articulatus* | 54 |
| *Cyperus capitatus* | 41 |
| *Cyperus compressus* | 48 |
| *Cyperus conglomeratus* | 37 |
| *Cyperus cuspidatus* | 56 |
| *Cyperus cyperoides* | 41 |
| *Cyperus dentatus* | 17 |
| *Cyperus difformis* | 16 |
| *Cyperus digitatus* | 42 |
| *Cyperus distans* | 24 |
| *Cyperus elegans* | 25 |
| *Cyperus eragrostis* | 21 |
| *Cyperus esculentus* | 54 |
| *Cyperus exaltatus* | 48 |
| *Cyperus fuscus* | 24 |
| *Cyperus grayi* | 83 |
| *Cyperus haspan* | 13 |
| *Cyperus houghtonii* | 39 |
| *Cyperus imbricatus* | 55 |
| *Cyperus involucratus* | 16 |
| *Cyperus iria* | 16 |
| *Cyperus laevigatus* | 42 |
| *Cyperus longus* | 60 |
| *Cyperus lupulinus* | 83 |
| *Cyperus microiria* | 52 |
| *Cyperus nutans* | 28 |
| *Cyperus papyrus* | 50 |
| *Cyperus pilosus* | 18 |
| *Cyperus rotundus* | 40 |
| *Cyperus rubicundus* | 25 |
| *Cyperus schweinitzii* | 40 |
| *Cyperus squarrosus* | 49 |
| *Cyperus tenuispica* | 8 |
| *Dulichium arundinaceum* | 16 |
| *Eleocharis acicularis* | 10 |
| *Eleocharis acuta* | 10 |
| *Eleocharis atropurpurea* | 5 |
| *Eleocharis attenuata* | 10 |
| *Eleocharis brittonii* | 5 |
| *Eleocharis coloradoensis* | 4 |
| *Eleocharis compressa* | 9 |
| *Eleocharis confervoides* | 19‡ |
| *Eleocharis congesta* | 10 |
| *Eleocharis debilis* | 5 |
| *Eleocharis dietrichiana* | 15 |
| *Eleocharis dulcis* | 38 |
| *Eleocharis elliptica* | 19 |
| *Eleocharis engelmannii* | 5 |
| *Eleocharis erythropoda* | 9 |
| *Eleocharis fallax* | 22 |
| *Eleocharis flavescens* | 10 |
| *Eleocharis geniculata* | 5 |
| *Eleocharis gracilis* | 10 |
| *Eleocharis intermedia* | 11 |
| *Eleocharis kamtschatica* | 21 |
| *Eleocharis lanceolata* | 5 |
| *Eleocharis macrostachya* | 8 |
| *Eleocharis mamillata* | 8 |
| *Eleocharis microcarpa* | 5 |
| *Eleocharis montevidensis* | 10 |
| *Eleocharis multicaulis* | 10 |
| *Eleocharis obtusa* | 5 |
| *Eleocharis ovata* | 5 |
| *Eleocharis pachycarpa* | 20 |
| *Eleocharis pallens* | 20 |
| *Eleocharis palustris* | 5 |
| *Eleocharis parishii* | 5 |
| *Eleocharis parvula* | 5 |
| *Eleocharis quinqueflora* | 10 |
| *Eleocharis retroflexa* | 5 |
| *Eleocharis tenuis* | 12 |
| *Eleocharis tetraquetra* | 10 |
| *Eleocharis tuberculosa* | 15 |
| *Eleocharis uniglumis* | 24 |
| *Eleocharis wichurae* | 10 |
| *Eleochars valleculosa* | 8 |
| *Eriophorum angustifolium* | 29 |
| *Eriophorum brachyantherum* | 29 |
| *Eriophorum callitrix* | 30 |
| *Eriophorum chamissonis* | 30 |
| *Eriophorum comosum* | 26 |
| *Eriophorum gracile* | 30 |
| *Eriophorum latifolium* | 27 |
| *Eriophorum scheuchzeri* | 29 |
| *Eriophorum vaginatum* | 29 |
| *Eriophorum virginicum* | 29 |
| *Ficinia nodosa* | 15 |
| *Ficinia spiralis* | 15 |
| *Fimbristylis acuminata* | 5 |
| *Fimbristylis aestivalis* | 5 |
| *Fimbristylis autumnalis* | 5 |
| *Fimbristylis caroliniana* | 10 |
| *Fimbristylis complanata* | 5 |
| *Fimbristylis cymosa* | 5 |
| *Fimbristylis dichotoma* | 5 |
| *Fimbristylis diphylloides* | 5 |
| *Fimbristylis ferruginea* | 5 |
| *Fimbristylis littoralis* | 5 |
| *Fimbristylis ovata* | 5 |
| *Fimbristylis polytrichoides* | 5 |
| *Fimbristylis puberula* | 10 |
| *Fimbristylis schoenoides* | 5 |
| *Fimbristylis sieboldii* | 5 |
| *Fimbristylis spadicea* | 10 |
| *Fimbristylis squarrosa* | 5 |
| *Fimbristylis tetragona* | 5 |
| *Fimbristylis thermalis* | 10 |
| *Fimbristylis velata* | 12 |
| *Fuirena breviseta* | 23 |
| *Fuirena ciliaris* | 19 |
| *Fuirena pumila* | 23 |
| *Fuirena scirpoidea* | 23 |
| *Fuirena simplex* | 15 |
| *Fuirena umbellata* | 26 |
| *Gahnia aspera* | 40 |
| *Isolepis aucklandica* | 21 |
| *Isolepis cernua* | 27 |
| *Isolepis crassiuscula* | 32 |
| *Isolepis fluitans* | 30 |
| *Isolepis marginata* | 4‡ |
| *Isolepis prolifera* | 33 |
| *Isolepis setacea* | 14 |
| *Kyllinga brevifolia* | 9 |
| *Kyllinga bulbosa* | 7 |
| *Kyllinga odorata* | 12 |
| *Kyllinga pumila* | 9 |
| *Kyllingiella microcephala* | 50 |
| *Lagenocarpus guianensis* | 17 |
| *Lepironia articulata* | 17+ |
| *Lipocarpha drummondii* | 27 |
| *Lipocarpha micrantha* | 26 |
| *Lipocarpha microcephala* | 23 |
| *Machaerina articulata* | 12 |
| *Machaerina mariscoides* | 39 |
| *Morelotia affinis* | 23 |
| *Oreobolus pectinatus* | 19 |
| *Pycreus flavescens* | 35 |
| *Pycreus flavidus* | 8 |
| *Pycreus polystachyos* | 48 |
| *Pycreus sanguinolentus* | 24 |
| *Queenslandiella hyalina* | 56 |
| *Rhynchospora alba* | 13 |
| *Rhynchospora albiceps* | 10 |
| *Rhynchospora brownii* | 18 |
| *Rhynchospora capillacea* | 13 |
| *Rhynchospora chinensis* | 31 |
| *Rhynchospora corniculata* | 9 |
| *Rhynchospora fusca* | 13 |
| *Rhynchospora globosa* | 12 |
| *Rhynchospora latifolia* | 5 |
| *Rhynchospora marisculus* | 5 |
| *Rhynchospora microcarpa* | 18 |
| *Rhynchospora nervosa* | 5 |
| *Rhynchospora robusta* | 5 |
| *Rhynchospora rubra* | 10† |
| *Rhynchospora rugosa* | 18 |
| *Schoenoplectiella articulata* | 15 |
| *Schoenoplectiella erecta* | 5 |
| *Schoenoplectiella hallii* | 11 |
| *Schoenoplectiella hotarui* | 22 |
| *Schoenoplectiella juncoides* | 37 |
| *Schoenoplectiella lineolata* | 30 |
| *Schoenoplectiella mucronata* | 21 |
| *Schoenoplectiella purshiana* | 19 |
| *Schoenoplectiella saximontana* | 25 |
| *Schoenoplectiella senegalensis* | 14 |
| *Schoenoplectiella supina* | 14 |
| *Schoenoplectiella wallichii* | 36 |
| *Schoenoplectus acutus* | 19 |
| *Schoenoplectus americanus* | 19 |
| *Schoenoplectus articulatus* | 19 |
| *Schoenoplectus californicus* | 32 |
| *Schoenoplectus deltarum* | 39 |
| *Schoenoplectus heterochaetus* | 19 |
| *Schoenoplectus lacustris* | 21 |
| *Schoenoplectus litoralis* | 20 |
| *Schoenoplectus pungens* | 39 |
| *Schoenoplectus subterminalis* | 36 |
| *Schoenoplectus tabernaemontani* | 21 |
| *Schoenoplectus torreyi* | 21 |
| *Schoenoplectus triqueter* | 21 |
| *Schoenoplectus validus* | 21 |
| *Schoenus apogon* | 4 |
| *Schoenus brevifolius* | 61 |
| *Schoenus nigricans* | 22 |
| *Scirpoides holoschoenus* | 21 |
| *Scirpus ancistrochaetus* | 27 |
| *Scirpus atrocinctus* | 34 |
| *Scirpus atrovirens* | 25 |
| *Scirpus cyperinus* | 33 |
| *Scirpus expansus* | 32 |
| *Scirpus ficinioides* | 52‡ |
| *Scirpus flaccidifolius* | 27 |
| *Scirpus georgianus* | 26 |
| *Scirpus hattorianus* | 28 |
| *Scirpus lineatus* | 18 |
| *Scirpus longii* | 33 |
| *Scirpus maximowiczii* | 32 |
| *Scirpus microcarpus* | 32 |
| *Scirpus pallidus* | 28 |
| *Scirpus pedicellatus* | 34 |
| *Scirpus pendulus* | 20 |
| *Scirpus polyphyllus* | 29 |
| *Scirpus polystachyus* | 30 |
| *Scirpus radicans* | 28 |
| *Scirpus sylvaticus* | 31 |
| *Scleria foliosa* | 10 |
| *Scleria microcarpa* | 10 |
| *Scleria pergracilis* | 5 |
| *Scleria tessellata* | 14 |
| *Tetraria capillaris* | 10 |
| *Trichophorum alpinum* | 29 |
| *Trichophorum cespitosum* | 52 |
| *Trichophorum pumilum* | 39 |
| *Trichophorum uniflorum* | 37 |

† Hoshino (1987)

‡ Márquez-Corro et al. (2018)

+ Uchiyama et al. (2010)

\* M. Luceño (personal communication)

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