|  |  |  |
| --- | --- | --- |
| Appendix 1. 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. Nomenclature is written as in the original publication; synonyms are placed in the same row. | | |
| Hinchliff and Roalson (2013) | **Haploid number (n)** | **Spalink et al. (2016)** |
| *Abildgaardia ovata* | 5 | *Fimbristylis ovata* |
| *Actinoscirpus grossus* | 41 | *Actinoscirpus grossus* |
| *Blysmus compressus* | 22 | *Blysmus compressus* |
|  | 20 | *Blysmus rufus* |
| *Bolboschoenus fluviatilis* | 47 | *Bolboschoenus fluviatilis* |
| *Bolboschoenus maritimus* | 20 |  |
| *Bolboschoenus planiculmis* | 28 | *Bolboschoenus planiculmis* |
| *Bulbostylis barbata* | 5 | *Bulbostylis barbata* |
| *Bulbostylis densa* | 32 | *Bulbostylis densa* |
| *Bulbostylis hispidula* | 5 | *Bulbostylis hispidula* |
|  | 42 | *Bulbostylis juncoides* |
| *Calyptrocarya glomerulata* | 10‡ | *Calyptrocarya glomerulata* |
|  | 22 | *Carex albursina* |
| *Carex aquatilis* | 38 |  |
| *Carex aquatilis* var *aquatilis* | 38 |  |
| *Carex aquatilis* var *minor* | 38 |  |
|  | 27 | *Carex arcta* |
| *Carex atrofusca* | 19 |  |
| *Carex baccans* | 23 | *Carex baccans* |
| *Carex backii* | 33 |  |
| *Carex canescens* | 28 |  |
| *Carex capillacea* | 30 |  |
| *Carex capillaris* | 9 | *Carex capillaris* |
|  | 25 | *Carex capitata* |
| *Carex cephalophora* | 24 |  |
| *Carex chordorrhiza* | 31 | *Carex chordorrhiza* |
| *Carex comans* | 20 |  |
| *Carex conferta* | 26 | *Carex conferta* |
|  | 21 | *Carex cruciata* |
| *Carex debilis* | 27 |  |
|  | 27 | *Carex deweyana* var *deweyana* |
|  | 30 | *Carex diandra* |
|  | 19 | *Carex dissitiflora* |
| *Carex distans* | 35 |  |
|  | 31 | *Carex disticha* |
| *Carex divulsa* | 28 |  |
|  | 27 | *Carex eburnea* |
| *Carex echinata* | 26 |  |
| *Carex echinochloe* | 21 | *Carex echinochloe* |
| *Carex extensa* | 30 |  |
|  | 41 | *Carex foenea* |
| *Carex fuliginosa* | 20 |  |
|  | 17 | *Carex gibba* |
| *Carex glacialis* | 17 |  |
|  | 21 | *Carex granularis* |
| *Carex grayi* | 26 |  |
| *Carex halleriana* | 26 |  |
| *Carex heterolepis* | 40 |  |
| *Carex hochstetteriana* | 38 |  |
| *Carex hostiana* | 28 | *Carex hostiana* |
| *Carex humilis* | 18 |  |
| *Carex kiotensis* | 37 |  |
| *Carex lachenalii* | 31 |  |
| *Carex lamprocarpa* | 29 |  |
| *Carex leptalea* | 26 | *Carex leptalea* var *leptalea* |
| *Carex livida* | 16 |  |
|  | 37 | *Carex macrocephala* |
| *Carex magellanica* | 29 |  |
| *Carex marina* | 31 |  |
| *Carex maritima* | 30 |  |
| *Carex membranacea* | 38 |  |
| *Carex microglochin* | 28 |  |
| *Carex nardina* | 34 |  |
| *Carex nigra* | 41 |  |
| *Carex obtusata* | 26 |  |
|  | 38 | *Carex oligosperma* |
| *Carex otrubae* | 29 |  |
| *Carex ovalis* | 33 |  |
|  | 6 | *Carex pachygyna* |
| *Carex pairae* | 28 |  |
| *Carex paleacea* | 36 |  |
|  | 32 | *Carex pallescens* |
| *Carex panicea* | 16 |  |
| *Carex pauciflora* | 19 | *Carex pauciflora* |
| *Carex pendula* | 29 | *Carex pendula* |
| *Carex peregrina* | 31 |  |
| *Carex pilulifera* | 9 |  |
|  | 33 | *Carex pseudocyperus* |
| *Carex pulicaris* | 30 |  |
| *Carex punctata* | 34 |  |
|  | 29 | *Carex radiata* |
| *Carex rariflora* | 26 |  |
| *Carex recta* | 38 |  |
|  | 26 | *Carex richardsonii* |
| *Carex rostrata* | 37 |  |
| *Carex rupestris* | 25 |  |
|  | 19 | *Carex satsumensis* |
| *Carex saxatilis* | 39 |  |
| *Carex scirpoidea* | 31 |  |
| *Carex shimidzensis* | 34 |  |
|  | 6 | *Carex siderosticta* |
| *Carex viridula* | 35 |  |
| *Carex xerantica* | 34 |  |
| *Chrysitrix capensis* | 23‡ | *Chrysitrix capensis* |
| *Cladium mariscoides* | 39 | *Cladium mariscoides* |
| *Cladium mariscus* | 18 | *Cladium mariscus* |
| *Cyperus alternifolius* | 16 | *Cyperus alternifolius* |
| *Cyperus capitatus* | 41 |  |
| *Cyperus cuspidatus* | 56 |  |
| *Cyperus cyperoides* | 41 |  |
| *Cyperus difformis* | 16 |  |
| *Cyperus eragrostis* | 21 | *Cyperus eragrostis* |
| *Cyperus esculentus* | 54 |  |
| *Cyperus fuscus* | 24 | *Cyperus fuscus* |
|  | 39 | *Cyperus houghtonii* |
| *Cyperus involucratus* | 16 |  |
| *Cyperus iria* | 16 | *Cyperus involucratus* |
| *Cyperus longus* | 60 | *Cyperus longus* |
|  | 50 | *Cyperus papyrus* |
|  | 40 | *Cyperus schweinitzii* |
| *Desmoschoenus spiralis* | 15 |  |
| *Dulichium arundinaceum* | 16 | *Dulichium arundinaceum* |
| *Eleocharis acicularis* | 10 | *Eleocharis acicularis* |
| *Eleocharis acicularis*var*longiseta* | 10 |  |
| *Eleocharis acuta* | 10 |  |
| *Eleocharis atropurpurea* | 5 |  |
|  | 9 | *Eleocharis compressa* var *compressa* |
| *Eleocharis confervoides* | 19‡ |  |
| *Eleocharis congesta* | 10 |  |
| *Eleocharis cylindrostachys* | 10 |  |
| *Eleocharis dulcis* | 38 | *Eleocharis dulcis* |
| *Eleocharis engelmannii* | 5 |  |
| *Eleocharis erythropoda* | 9 |  |
| *Eleocharis flavescens* | 10 |  |
|  | 15 | *Eleocharis flavescens* var *olivacea* |
| *Eleocharis geniculata* | 5 |  |
| *Eleocharis gracilis* | 10 |  |
|  | 8 | *Eleocharis mamillata* var *mamillata* |
| *Eleocharis montevidensis* | 10 |  |
| *Eleocharis multicaulis* | 10 |  |
| *Eleocharis obtusa* | 5 |  |
| *Eleocharis pallens* | 20 |  |
| *Eleocharis palustris* | 5 |  |
| *Eleocharis quinqueflora* | 10 |  |
| *Eleocharis tenuis* | 12 |  |
| *Eleocharis tuberculosa* | 15 |  |
|  | 24 | *Eleocharis uniglumis* |
| *Eriophorum angustifolium* | 29 | *Eriophorum angustifolium* var *angustifolium* |
| *Eriophorum brachyantherum* | 29 |  |
| *Eriophorum chamissonis* | 30 |  |
|  | 30 | *Eriophorum gracile* |
| *Eriophorum vaginatum* | 29 |  |
|  | 29 | *Eriophorum virginicum* |
| *Ficinia nodosa* | 15 | *Ficinia nodosa* |
|  | 15 | *Ficinia spiralis* |
|  | 5 | *Fimbristylis aestivalis* |
|  | 5 | *Fimbristylis autumnalis* |
| *Fimbristylis complanata* | 5 | *Fimbristylis complanata* |
| *Fimbristylis dichotoma* | 5 |  |
| *Fimbristylis ferruginea* | 5 |  |
| *Fimbristylis littoralis* | 5 |  |
| *Fimbristylis squarrosa* | 5 | *Fimbristylis squarrosa* |
| *Fimbristylis velata* | 12 |  |
| *Fuirena breviseta* | 23 |  |
| *Fuirena ciliaris* | 19 | *Fuirena ciliaris* |
| *Fuirena pumila* | 23 |  |
| *Fuirena scirpoidea* | 23 |  |
| *Fuirena simplex* | 15 |  |
| *Fuirena umbellata* | 26 |  |
| *Gahnia aspera* | 40 | *Gahnia aspera* |
| *Isolepis aucklandica* | 21 |  |
| *Isolepis cernua* | 27 |  |
| *Isolepis crassiuscula* | 32 | *Isolepis crassiuscula* |
| *Isolepis fluitans* | 30 |  |
| *Isolepis marginata* | 4‡ |  |
| *Isolepis prolifera* | 33 | *Isolepis prolifera* |
| *Isolepis setacea* | 14 | *Isolepis setacea* |
| *Kobresia fragilis* | 29 |  |
|  | 29 | *Kobresia myosuroides* |
| *Kobresia simpliciuscula* | 35 | *Kobresia simpliciuscula* |
| *Kyllinga brevifolia* | 9 | *Kyllinga brevifolia* |
| *Kyllinga bulbosa* | 7 | *Kyllinga bulbosa* |
| *Kyllingiella microcephala* | 50 |  |
|  | 17 | *Lagenocarpus guianensis* |
| *Lepironia articulata* | 17+ | *Lepironia articulata* |
|  | 26 | *Lipocarpha micrantha* |
|  | 23 | *Lipocarpha microcephala* |
| *Baumea articulata* | 12 | *Machaerina articulata* |
| *Machaerina mariscoides* | 39 | *Machaerina mariscoides* |
| *Oreobolus pectinatus* | 19 | *Oreobolus pectinatus* |
| *Pycreus flavescens* | 35 |  |
| *Rhynchospora alba* | 13 | *Rhynchospora alba* |
| *Rhynchospora albiceps* | 10 | *Rhynchospora albiceps* |
| *Rhynchospora barbata* | 5 |  |
| *Rhynchospora brownii* | 18 |  |
|  | 13 | *Rhynchospora capillacea* |
| *Rhynchospora cephalotes* | 9 |  |
| *Rhynchospora chinensis* | 31 | *Rhynchospora chinensis* |
| *Rhynchospora corniculata* | 9 |  |
| *Rhynchospora fusca* | 13 |  |
| *Rhynchospora globosa* | 12 | *Rhynchospora globosa* |
| *Rhynchospora latifolia* | 5 |  |
| *Rhynchospora marisculus* | 5 |  |
| *Rhynchospora nervosa* | 5 | *Rhynchospora nervosa* |
| *Rhynchospora pubera* | 5 |  |
| *Rhynchospora riparia* | 5 |  |
| *Rhynchospora robusta* | 5 | *Rhynchospora robusta* |
| *Rhynchospora rubra* | 10† | *Rhynchospora rubra* |
| *Rhynchospora rugosa* | 18 |  |
| *Rhynchospora tenerrima* | 10 |  |
| *Schoenoplectiella articulata* | 15 |  |
| *Schoenoplectiella hotarui* | 22 | *Schoenoplectiella hotarui* |
| *Schoenoplectiella juncoides* | 37 |  |
| *Schoenoplectiella lineolata* | 30 |  |
| *Schoenoplectiella mucronata* | 21 |  |
| *Schoenoplectiella senegalensis* | 14 |  |
| *Schoenoplectiella wallichii* | 36 |  |
|  | 19 | *Schoenoplectus acutus* var *acutus* |
|  | 15 | *Schoenoplectus articulatus* |
|  | 11 | *Schoenoplectus hallii* |
|  | 19 | *Schoenoplectus heterochaetus* |
| *Schoenoplectus lacustris* | 21 | *Schoenoplectus lacustris* |
| *Schoenoplectus litoralis* | 20 |  |
| *Schoenoplectus pungens* | 39 | *Schoenoplectus pungens* |
|  | 19 | *Schoenoplectus purshianus* var *purshianus* |
|  | 20 | *Schoenoplectus smithii* var *smithii* |
| *Schoenoplectus tabernaemontani* | 21 |  |
| *Schoenoplectus triqueter* | 21 |  |
| *Schoenoplectus validus* | 21 |  |
| *Schoenoxiphium burkei* | 35\* |  |
| *Schoenoxiphium ecklonii* | 36\* |  |
| *Schoenoxiphium filiforme* | 36\* |  |
| *Schoenoxiphium ludwigii* | 34 |  |
| *Schoenoxiphium sparteum* | 32\* |  |
| *Schoenus apogon* | 4 |  |
| *Schoenus brevifolius* | 61 | *Schoenus brevifolius* |
| *Schoenus nigricans* | 22 | *Schoenus nigricans* |
| *Scirpoides holoschoenus* | 21 | *Scirpoides holoschoenus* |
| *Scirpoides holoschoenus* var *thunbergii* | 42 |  |
| *Scirpus ancistrochaetus* | 27 |  |
| *Scirpus atrocinctus* | 34 |  |
| *Scirpus cyperinus* | 33 | *Scirpus cyperinus* |
|  | 14 | *Scirpus di*var*icatus* |
| *Scirpus expansus* | 32 | *Scirpus expansus* |
| *Scirpus ficinioides* | 52‡ | *Scirpus ficinioides* |
| *Scirpus flaccidifolius* | 27 |  |
| *Scirpus fontinalis* | 18 |  |
| *Scirpus georgianus* | 26 |  |
| *Scirpus hattorianus* | 28 |  |
|  | 32 | *Scirpus maximowiczii* |
| *Scirpus microcarpus* | 32 | *Scirpus microcarpus* |
| *Scirpus mitsukurianus* | 34 |  |
| *Scirpus orientalis* | 14 |  |
| *Scirpus pendulus* | 20 | *Scirpus pendulus* |
| *Scirpus polystachyus* | 30 | *Scirpus polystachyus* |
| *Scirpus radicans* | 28 | *Scirpus radicans* |
| *Scirpus sylvaticus* | 31 | *Scirpus sylvaticus* |
| *Scleria foliosa* | 10 | *Scleria foliosa* |
| *Tetraria capillaris* | 10 | *Tetraria capillaris* |
| *Trichophorum alpinum* | 29 | *Trichophorum alpinum* |
| *Trichophorum cespitosum* | 52 | *Trichophorum cespitosum* |
| *Trichophorum pumilum* | 39 |  |
| *Uncinia filiformis* | 44 |  |
| *Uncinia phleoides* | 48 | *Uncinia phleoides* |
| *Uncinia uncinata* | 44 | *Uncinia uncinata* |

† Hoshino (1987)

‡ Márquez-Corro et al. (2018)

+ Uchiyama et al. (2010)

\* M. Luceño (personal communication)

**LITERATURE CITED**

Hinchliff, C.E., Roalson, E.H., 2013. Using supermatrices for phylogenetic inquiry: An example using the sedges. Syst. Biol. 62, 205–219. doi:10.1093/sysbio/sys088

Hoshino, T., 1987. Karyomorphological studies on seven species of japanese *Rhynchospora* (Cyperaceae). Kromosomo New Ser. 2, 1557–1561.

Márquez-Corro, J.I et al. unpublished.

Rice, A., Glick, L., Abadi, S., Einhorn, M., Kopelman, N.M., Salman-Minkov, A., Mayzel, J., Chay, O., Mayrose, I., 2015. The Chromosome Counts Database (CCDB) - a community resource of plant chromosome numbers. New Phytol. 206, 19–26. doi:10.1111/nph.13191

Spalink, D., Drew, B.T., Pace, M.C., Zaborsky, J.G., Starr, J.R., Cameron, K.M., Givnish, T.J., Sytsma, K.J., 2016. Biogeography of the cosmopolitan sedges (Cyperaceae) and the area-richness correlation in plants. J. Biogeogr. 43, 1893–1904. doi:10.1111/jbi.12802

Uchiyama, H., Matoba, H., Aizawa, T., Sumida, H., & Nhut, D. M., 2010. Chromosome counts of some wetland cyperaceous species from the Mekong Delta, Vietnam. Cytologia. 75, 335–339. doi:10.1508/cytologia.75.335