## Supporting Information

Article title: Homoploid hybrids, allopolyploids, and high ploidy levels characterize the evolutionary history of a western North American quillwort complex (*Isoëtes*)

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**Fig. S1** Population structure analysis for western North American *Isoëtes* at *K* = 2-5. Unique specimen names are indicated at the bottom of the figure, species names and ploidy are at the top of the figure. *K* = 3 is the most biologically meaningful arrangement of populations. The diploid species (*I. bolanderi*, blue; *I. echinospora*, brown) and hexaploid *I. occidentalis* (green) are separated as the three main populations. The hybrid species (*I.* ✕ *herb-wagneri*, *I. maritima*, *I. hyb. nov.* A, and *I. hyb. nov.* B) are constructed of proportions of those three main populations.

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**Fig. S2** Split network depicting reticulate relationships of western North American *Isoëtes*. Each sample is colored by their taxon name. *I. echinospora* (brown); *I. hyb. nov.*B (purple); *I. occidentalis*(green); *I. hyb. nov.* A (red); *I. maritima* (dark blue); *I.* **✕** *herb-wagneri* (yellow); *I. bolanderi*(cyan). Hybrids of *I. echinospora* and *I. bolanderi*cluster between the two parent taxa. Hybrids between *I. occidentalis*and *I. bolanderi*also cluster between their parental taxa.



**Fig. S3** Phylogenetic tree derived from IQ tree, of North American *Isoëtes* reconstructed using multiple alleles of the *LFY* gene. Outgroups and diploids are colored in black, taxa of interest are colored in blue.

