Supplemental Figure 1. The radar plots for the phenotypic mean standard error (darker shading) in 15 sampling locations. The maximum values for the axis for each trait were as follows: 280.0 cm for blade length, 30.0 cm for blade width at $10 \mathrm{~cm}, 50.0 \mathrm{~cm}$ blade width at widest, 3.0 mm for blade thickness, 160.0 cm for stipe length, and 21 mm for stipe diameter.

Supplemental Figure 2. Visualization of layers $(\mathrm{K})$ contributions from conStruct results using $\mathrm{MCMC}=50,000$ iterations with a burn-in of 500 iterations that were discarded. The layer contribution is estimated in the software as proportion of variance being explained by adding that layer to the total variance. Results shown for a) all samples with $K=1$ to $6 ; b$ ) all samples with $K=3$ and $K=4$; c) samples within GOM from $K=1$ to 4 ;

## Supplemental Figure 1



Supplemental Figure 2
a

b.

c.


