Supplemental materials for Phenological sequences: How early-season events define those that follow

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Supplemental Tables

Table S1: Summary of linear models for relationships between later phenophases and earlier phenophases, as shown in Figure 3 in the main text. Linear models were fit with the species-level mean day-of-year of the later phenological stages as the response variable, and mean day-of-year of earlier phenostage as the explanatory variable.

previous phenostage model	intercept	slope	r^2	p
leafout vs. budburst	65.84	15.33	0.44	<0.001
flowering vs. budburst	3.18	65.27	0.17	0.039
fruiting vs. budburst	-80.31	96.27	0.23	0.016
senescence vs. budburst	243.88	45.52	0.03	0.427
flowering vs. leafout	-105.28	80.04	0.30	0.005
fruiting vs. leafout	-107.19	134.07	0.16	0.051
senescence vs. leafout	237.39	60.89	0.02	0.484
fruiting vs. flowering	5.21	31.73	0.54	<0.001
senescence vs. flowering	261.65	19.36	0.04	0.332
senesence vs. fruiting	253.54	14.00	0.14	0.06

Table S2: Summary of linear models for relationships between later phenophases and inter-phenophase duration, as shown in Figure 4 in the main text. Linear models were fit with the species-level mean day-of-year of the later phenological stages as the response variable, and the number of days in each previous inter-phenophase duration as the explanatory variable.

inter-phenophase model	intercept	slope	r^2	p
leafout vs. leafout-budburst	128.977	2.330	0.035	0.374
flowering vs. leafout-budburst	144.522	8.307	0.001	0.874
fruiting vs. leafout-budburst	276.477	15.903	0.047	0.3
senescence vs. leafout-budburst	281.980	5.338	0.004	0.763
flowering vs. flowering-leafout	129.280	1.591	0.926	<0.001
fruiting vs. flowering-leafout	245.864	9.920	0.250	0.011
senescence vs. flowering-leafout	278.627	3.698	0.034	0.381
fruiting vs. fruiting-flowering	143.556	15.426	0.740	<0.001
senescence vs. fruiting-flowering	258.294	8.647	0.242	0.013
senesence vs. senescence-fruiting	282.109	3.231	0.047	0.296

Supplemental Figures

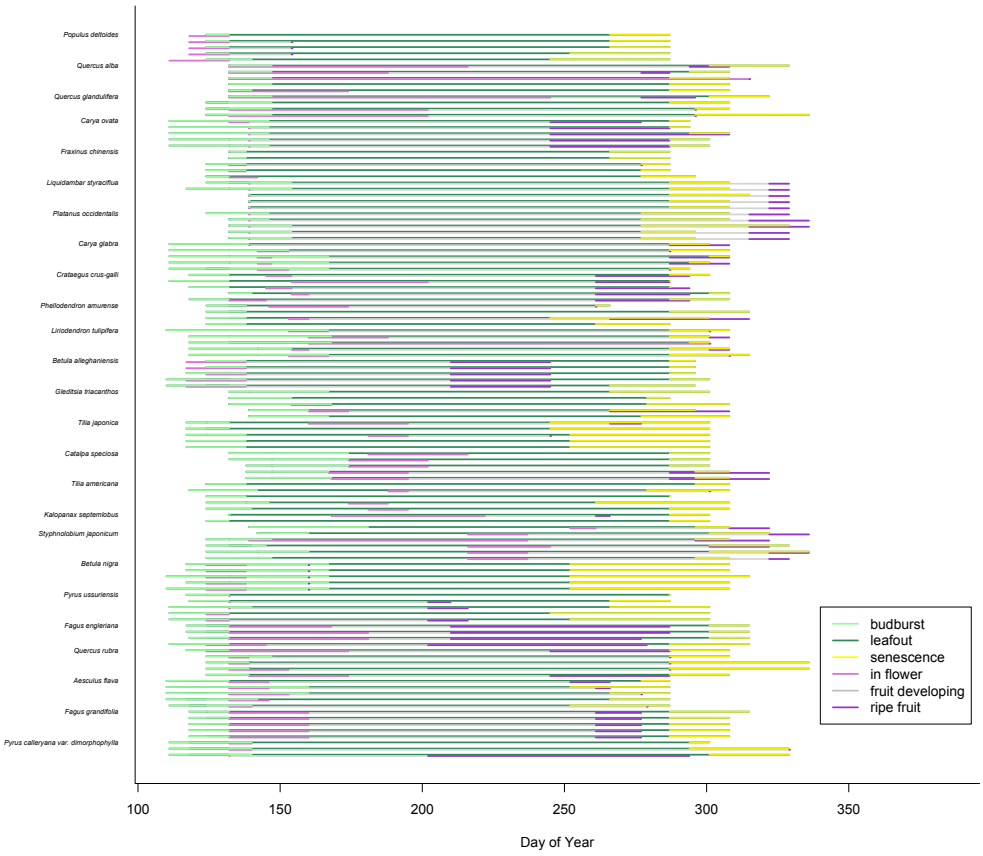

Figure S1: **Individual tree phenology during the 2015 growing season, ordered by species-level mean first-flower dates.** Growth phenology is shown for budburst (from its mean start day-of-year to the mean start day-of-year for leafout, across all individuals within a species), leafout (from the mean day-of-year when fully-expanded leaves were first observed through the start of senescence), and senescence (from the mean day-of-year when leaves first began changing color through the mean day-of-year when more than 95 percent of leaves on the tree had changed color). Reproductive phenology is shown for flowering (from the mean day-of-year when flowers first appeared to the mean day-of-year when fruits first appeared, across all individuals within a species) and fruiting (from the mean day-of-year when fruits first appeared to the mean day-of-year when more than 95 percent of fruits were first observed as ripe).