Authors	Description	Meristems
?	"On a more general level, we can consider the evolutionary trade-offs that have shaped inflorescence architecture within the context of plant life histories. Schemske (1980) has suggested that the upper limit to the size of the floral display of Brassavola nodosa is set by a life history framework in which early reproduction is at a premium. The highest level of conflict, then, is that between resource allocation to growth and maintenance vs. reproduction."	"On a more general level, we can consider the evolutionary trade-offs that have shaped inflorescence architecture within the context of plant life histories. Schemske (1980) has suggested that the upper limit to the size of the floral display of Brassavola nodosa is set by a life history framework in which early reproduction is at a premium. The highest level of conflict, then, is that between resource allocation to growth and maintenance vs. reproduction."
?	Low probability of survival to later in the season selects against reproductive delays, even though reproductive delays are associated with larger inflorescences and higher reproductive success	
? p 277	Advantage of raceme over compound cyme: as with solitary axillary flowers, production of many, few-flowered axillary racemes distributes reproduction more evenly over the plant as a whole than production of a few, many-flowered terminal inflorescences	
? p 277	Advantage of raceme over compound cyme: synthesis of reproductive material extends over a long period of time, so amount synthesized at any one time is less than for a compound determinate inflorescence	
? p 278-9	Advantage of raceme over compound cyme: "Inherent in an inflorescence that is indeterminate either with respect to its main axis or because of repeated sympodial branching is a flexibility that	

Stebbins cites examples of phenotypic plasticity: Pharbitis nil with either indeterminate inflorescences or terminal flowers (Marushige 1965, Bhar and Radforth 1969). Also cites examples from Penstemon corymbosus and discusses how a terminal flower is associated with "less vigorous growth"

Authors	Description	Meristems
Duffy et al. 1999 /Bonser and Aarssen 2003	In annual plants, branching maximizes plant size and the number of reproductive meristems at the end of the season	
Bonser and Aarssen 2003	responses in meristem allocation should occur at an early age; in high resource environments, this maximizes the number of growing stems accumulating size and meristems early in development, while in low resource environments there should be strong apical dominance/suppression of axillary meristems early to maximize LRS	
?	"it could be hypothesized that the indeterminate flowering in C.* carniolica versus the determinate flowering in C.* thyr-	

Authors	Description	Meristems
Bonser and Aarssen 2006	High branching intensity in high resource environments; allocation to R vs. G in response to relative juvenile and adult survival probability	
Bonser and Aarssen 2006	Within semelparous species, reproductive architecture matters: inflorescences have greater rep output per rep meristem than species with single flower from rep meristem, so resources may permit a few multiflowered inflorescences (s.t. low value of reproductive meristem allocation) or many single flowers (s.t. high value of reproductive meristem allocation)	
Salomonson 1994	Flexibility in duration of meristem activity helps explain plant's ability to respond to resource availability	
Law 1979	Tiller number constrains reproduction	
Smith 1984	Biomass does not determine plant form	
Watson 1984	Biomass does not determine plant form	
Geber 1990	Biomass does not determine plant form	
Cohen 1971	Model predicts sharp transition from growth to reproduction; this is not observed. One explanation is that there are constraints on how F can vary with time or with plant size; eg. meristems have to growth first	

Authors	Description	Meristems
Bonser and Aarssen 1996	High soil resources, light limiting: selection against high allocation to G or R; high I favored/strong apical dominance for vertical growth	
Bonser and Aarssen 1996	High soil resources, high light: selection against allocation to I; selection for G and growth through branching to take advantage of high light and nutrients; for monocarpic species this maximizes the absolute/relative number of meristems committed to R at the end of the season (cf. Geber 1990 and Smith 1984)	
Bonser and Aarssen 1996	Low soil resources, high light: selection against high G as w low resources there should be slow growth rate and a strong negative tradeoff between growth and reproduction; allocation to growth may mean slow growing plants don't have enough time to reproduce bc slow growth and probability of death; expect higher allocation to R in monocarpic species	
Bonser and Aarssen 2003	meristem allocation patterns may be weaker late in life?	

Authors	Description	Meristems
Bonser and Aarssen 2003	high allocation to G and R meristems in large plants/high resource availability; low allocation to G and R in small plants/low resource availability	
Bonser and Aarssen 2003	in favorable resource environments, increased allocation to new branches/G meristems is positively correlated with R meristems/negatively with I meristems	
Bonser and Aarssen 2006	Within semelparous species, reproductive architecture matters: so	

Authors	Description	Meristems
Cohen 1971/KR1982	When length of growing period is unpredictable, there should be some overlap in time of making seeds/leaves	
Dalgleish and Hartnett 2006	Perennials but: in arid environments meristem limitation constrains response to resource availability, while mesic grasslands maintain a meristem bud bank and are able to increase production in response to resource pulses; costs to maintain them (Lehtila and Larsson 2005) but benefits may include ability to resprout or ability to activate across the season; in arid environs small scale disturbance and patch dynamics are key while in mesic fire and changes in resource availability are - timing of meristem/resource key	
Kim and Donohue 2012	Variation in mono/polycarpy in plants is often associated with plant architecture; selection against multiple rosettes contributes to evolution of semelparous strategy	
Korner 2015	Tissue growth/meristem as sink is more constraining than resource availability	

Authors	Description	Meristems
? p 276	Reduction from cyme to solitary flower is associated with habitats in which rapid flowering is advantageous	
? p 276	Solitary flowers in axils are associated with low light, understory habitats where distributing flowers across all of plant is advantageous	
? p 277	Selection may favor an inflorescence with the same reproductive capacity but having more flowers, each with fewer seeds, if there is a predatory insect laying eggs on a flower (cf. Burtt 1960)	
?	"the indeterminate growth patterns of a racemose inflorescence might be favored in climates showing low predictability within or between seasons in terms of precipitation or other resources affecting pollination or fruit maturation." This statement is in reference to pollinators.	
?	For fixed season lengths, the optimal inflorescence is a panicle. For variable season lengths, racemes and cymes are favored because a plant produces some flowers early but can continue to flower if the season continues to extend. For racemes and cymes, only some of the meristems are in the floral state at a given time and this may lead to higher fitness than panicles. Cites this as a form of beg hedging.	

The evolution of plant architecture (sussex and kerk

Constraints: FSM plant models (Christophe et al. 2008)

Finley - cost of apical dominance Lauxmann - transient carbon limitation

Obeso - cost of reproduction

Hopper 2003, King and Roughgarden 1982a/b - Graded allocation, vegetative multiple switches, Cohen 1966 - optimizing rep in variable envir, Haccou Iwasa 1995, Kussell Leibler 2005