

## Questions about seeds and seedlings

- 1) What causes popcorn to "pop" when heated in oil? Why was "Indian corn" especially significant to Native Americans? The Pilgrim Fathers?
- 2) These chaparral shrub seeds do not germinate after significant rainfall but when placed in the presence of smoke or charred wood, they germinate. Why? What is the selective advantage of such a trait?
- 3) The shoot of a monocotyledonous plant has a "basal meristem" whereas the shoot of a dicotyledonous plant has an "apical meristem." Which is best adapted for the grazing animals of Midwestern America, where "buffalo" used to roam?
- 4) Bean sprouts on your health-food sandwich often have a "hook" at the base of the cotyledons (hypocotyl hook). What is the adaptive significance of this hook?
- 5) The castor bean plant, *Ricinus communis*, used to be cultivated in the Malibu area, but has escaped from cultivation and is now considered a weed. Why was it cultivated in Malibu? Why is it now considered a weed?