PLSC 731: Paper Review

Gepts: Crop Domestication as a Long-term Selection Experiment
Questions (reference pages in parentheses)

1. What is the definition of domestication?? (2)

2. What is conscious or inadvertent domestication? Was domestication conscious or inadvertent? (3,4)

3. Is the mutation rate rapid enough to account for the appearance of a domestication trait? (4)

4. What are the degrees of the domestication syndrome? (5)

5. Describe the domestication corollaries. (6)

6. What are the centers of origin of agriculture? (7)

7. What are some common features of these centers of origin? (8,9)

8. Where were maize, common bean, einkorn wheat, cassava, and cattle domesticated? (9-12)

9. What are some of the difficulties and reasons for determining sites of domestication? (12-13)

10. What is the value/effects of molecular markers, representative samples, and gene flow on determining the sites of domestication? (12-13)

11. What traits can give clues to the events associated with domestication? How might studying these traits give us clues to the rate of domestication? (14-16)

12. What is the domestication syndrome? In general, what traits distinguish wild and cultivated plants? (18-22)

13. What type of inheritance might you observed for a domestication trait? (22-23)

14. In general, does the environment significantly impact these traits? Why not? (23)

15. Discuss the role of linkage, recombination, outcrossing, and selfing in the fixation of the domestication syndrome? (25-26)

16. What is the role of polyploidy? (27)

17. What have we learned about the nature of domestication genes by cloning them? (28-29)

18. What effect has domestication had upon diversity in crop plants? (29-31)