Advanced Ecology Discussion Questions

- 1. How well does a simple unit such as cal/cm²/min represent the ecology of an organism?
- 2. Q_{abs} is the amount of radiation absorbed by the animal surface. What ecological drivers affect Q_{abs}?
- 3. Could this approach be adapted to aquatic animals? Or to predicting species distributions in general?
- 4. A pig is a fat grasshopper. Convince me I'm wrong.
- 5. Do the climate diagrams help think about differences between ecto- and homeotherms? Birds and mammals?
- 6. Do climate diagrams help understand your observations of brown anoles of different sizes during the day? During the seasons?
- 7. What do Figures 21 & 22 tell us about humans?

Grime (1977)

- 9. His definition of competition (p. 1170, 2nd full paragraph) aims to mechanism rather than effect and assumes proximity. What say ye?
- 10. p. 1171, middle: "When noncompetitive effects have been discounted, the remaining objection to a unified concept of competitive ability arises because competition occurs with respect to several different resources including light, water, various mineral nutrients, and space. Hence it might be supposed that the ability to compete for a given resource varies independently from the ability to compete for each of the others. ... A more logical interpretation is that the abilities to compete for light, water, mineral nutrients, and space *are interdependent* to the extent that natural selection has caused their development to a comparable extent in any particular genotype."



<u>Question</u>: Is Tilman's model (based on two algal species) then overly simplistic for terrestrial plants? Google Scholar "Tilman resource competition" for me...

- 11. Can you imagine predictive math models that use climate, etc. etc. to predict CSR types?
- 12. Dominance (p. 1189-90). If this is a fourth axis (or "dimension") on top of his Fig. 2 triangle, what shape do you see?
- 13. Is this a general framework to understand life history strategies among all organisms?