m2M meeting, 6/20/11

- Project personnel update
  - Postdoc ads. The add for ecology postdocs is on the street. The Flints' add for a hydro-climate modeler will go out this week.
  - Other research assistants
    - Andy Shepard, who just completed the Bren MESM program, will assist FD for 6 mos installing microclimate equipment and experimental gardens.
    - Andy MacDonald, PhD student with FD, will be employed this summer to help install microclimate equipment and common gardens
- Weather equipment order
  - Based on today's discussion, we will order temperature only data loggers, not temperature/rel. humidity.
  - Data loggers will be placed near/on the soil surface, so will be below the snow pack at Teakettle. We may also want to measure air temp above the snowpack. Weather Stations at Teakettle will need to be set high enough to remain above the snow pack.
- July field schedule
  - Revised slightly. FD and crew will install first station and sensor net at Sedgwick in mid-July to iron out any wrinkles in the design.
  - Site visit to Teakettle July 19-21 for reconnaissance and site selection. Return the following week for installation.
- Final shape files for areas (FD sent Lorrie a map of selected seed zones on 6/20)
- Modeling needs: Requests for Flints?

Response time of temperature sensors: how fast do they need to be?

- FD will look into this further. For seedlings it appears that there is an interaction between temperature and duration of exposure. Even 1-5 minutes at extreme high temperatures (>50 C) can kill ponderosa pine seedlings. This argues for fast-response external sensors.

Figure 6. Isosurvival curves of 10, 30, 50, 70, and 90 percent for 2- to 4-week-old seedlings: (A) ponderosa pine, (B) Douglas-fir, (C) grand fir, (D) Engelmann spruce. Each curve gives estimates of the various time-temperature combinations resulting in equal survival.

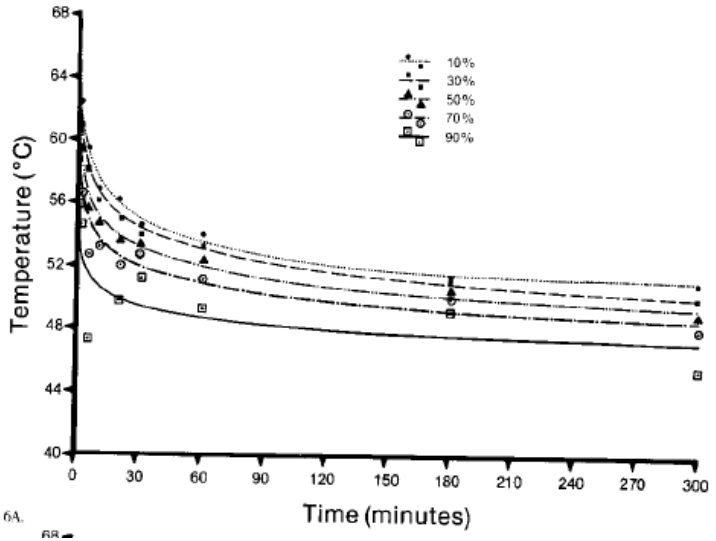

Figure 6A.

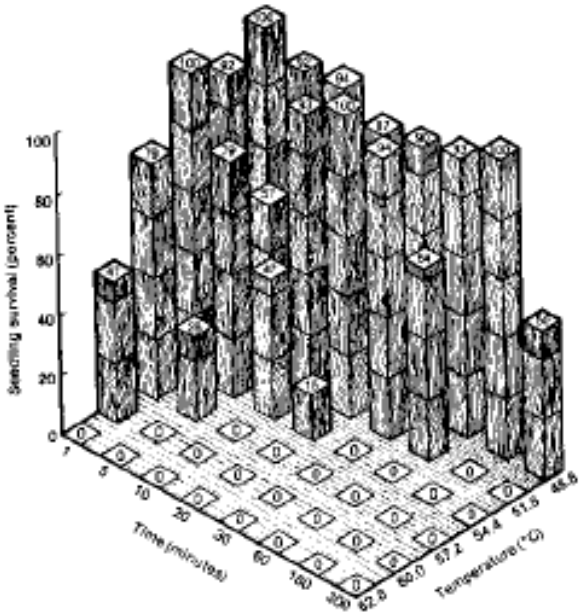

Figure 2. Effect of temperature and exposure time on survival of 2- to 4-week-old ponderosa pine seedlings. Numbers on tops of bars indicate survival percentages.

Seidel, K. 1986. Tolerance of seedlings of ponderosa pine douglas-fir, grand fir, and engelmann spruce for high-temperatures. Northwest Science 60:1-7.
Also see Kolb, PF; Robberecht, R High temperature and drought stress effects on survival of Pinus ponderosa seedlings
TREE PHYSIOLOGY, 16 (8): 665-672 AUG 1996

Field schedule

- Sedgwick
  - Trial installation mid-July
- Teakettle
  - July 18-22 just for reconn and site selection
    - Arrive Tuesday, depart Thursday
  - July 25-29 or later for site installation
- Big Creek
  - Aug 15-19
  - Aug 22-26

Next GoToMeeting conference call

- July 13, 1 PM.