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Research Notes

Fine-Scale Spatial Genetic Structure in *Pinus halepensis*

(or)

Effects of fire on the development and change of spatial genetic structure of seedling of *Pinus halepensis*.

Topic:

The effect of fire on the FSGS of seedling of *P. halepensis*

Site: [[1]](#endnote-1)

Nir-'Ezyon on the lower western slopes of Mt. Carmel (32°41"N; 34°58”E).

Mean annual rainfall at both sites is 600 mm.

The mean temperature of the hottest month (August) 24±26 \_C and the mean temperature of the coldest month (January) 12 \_C.

Altitude 116m a.s.l. 4km from the shore of the Mediterranean Sea is less dry and has a lower frequency of Sharav events (Levi 1978).

Research Questions:

# What is the spatial genetic structure before the fire?

# How does FSGS change over time without a fire event?

# How does FSGS change over time with a fire event?

# How does FSGS change immediately after a fire?

# How does FSGS change after germination time?

Does FSGS increase or decrease at 1, 3, 5, 10 year after the fire?

# Does the FSGS increase or decrease as seedling become established? (and later as other individuals die-out?)

How does the FSGS change as "initial seedlings" (established after the fire) reach reproductive age?

Null Hypothesis:

H0: There is a random pattern to the recruitment pattern / distribution of the seedling.

Alternative Hypothesis:

H1: Recruitment patterns are influenced by favorable micro-habitat (i.e. ash deposits)

H2: Recruitment patterns (and subsequent SGS) are influenced by limited seed distribution

H3: Recruitment patterns are influenced by

H4: Recruitment patterns are influenced by

1. Nathan\_etal1999JEcol [↑](#endnote-ref-1)