

ANALYSIS OF STEP-PT MONITORING OF GROUND-COVER  
IN THE ARANDA SNOWGUMS Paddock, 2006-15

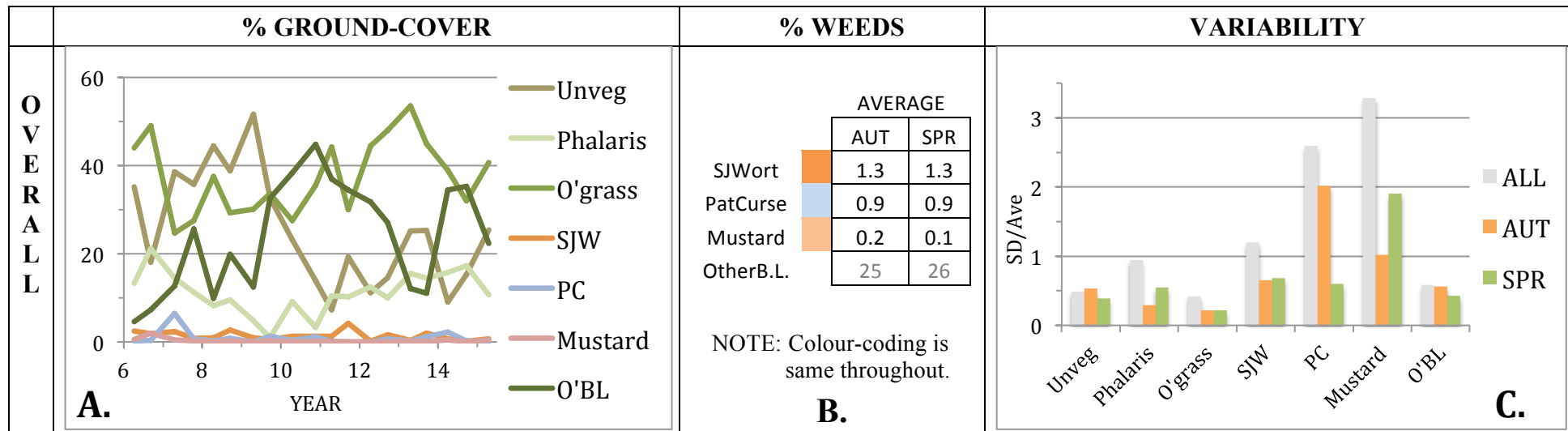
– by Jim Arnold

Many steps have accumulated in this decade of Autumn and Spring assays. Herewith my bid to glean meaning from it. To rationalize, its 6 transects pooled, and categories ‘Bare-ground’ + ‘Leaf-litter’ pooled into ‘Unveg’.

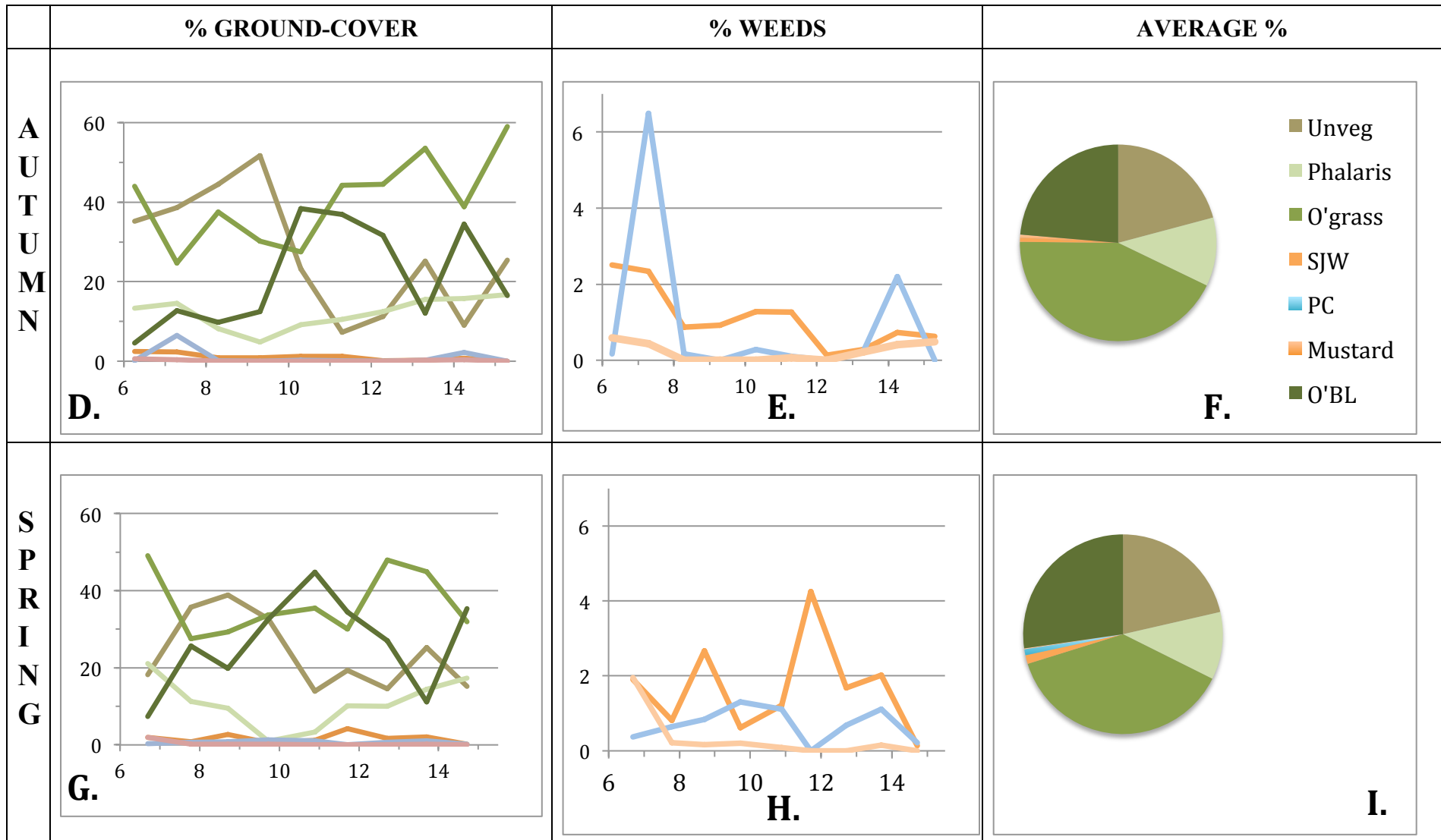
COMMENTS

1. VARIABILITY

Average variability\* overall ~twice the seasons’ considered separately. The 3 dicot weeds of concern had low average incidence, with lowest (Mustard) fluctuating the most both overall and in Spring, whereas Patersons Curse had the most variability in Autumn. Because of their variability, it is unclear as yet how effective our weeding efforts have been.



\* defined as  $\frac{\text{Std-devn}}{\text{mean}}$  (sole recourse to stats).



## 2. AUTUMN vs SPRING

The piecharts (F. & I.) show that Phalaris (our grass-weed) also averaged similar between seasons, though twice as variable in Spring (C). Other than the weeds, that Autumn had more other-grass, at the expense of other-broadleaf.

### 3. EFFECT OF RAIN

From local rain records (IanF's, 1km N of the Paddock) the assays were ranked by the amount that fell during the 4 months before\*, thence the 2 seasons pooled that followed the 2 highest and 2 lowest.

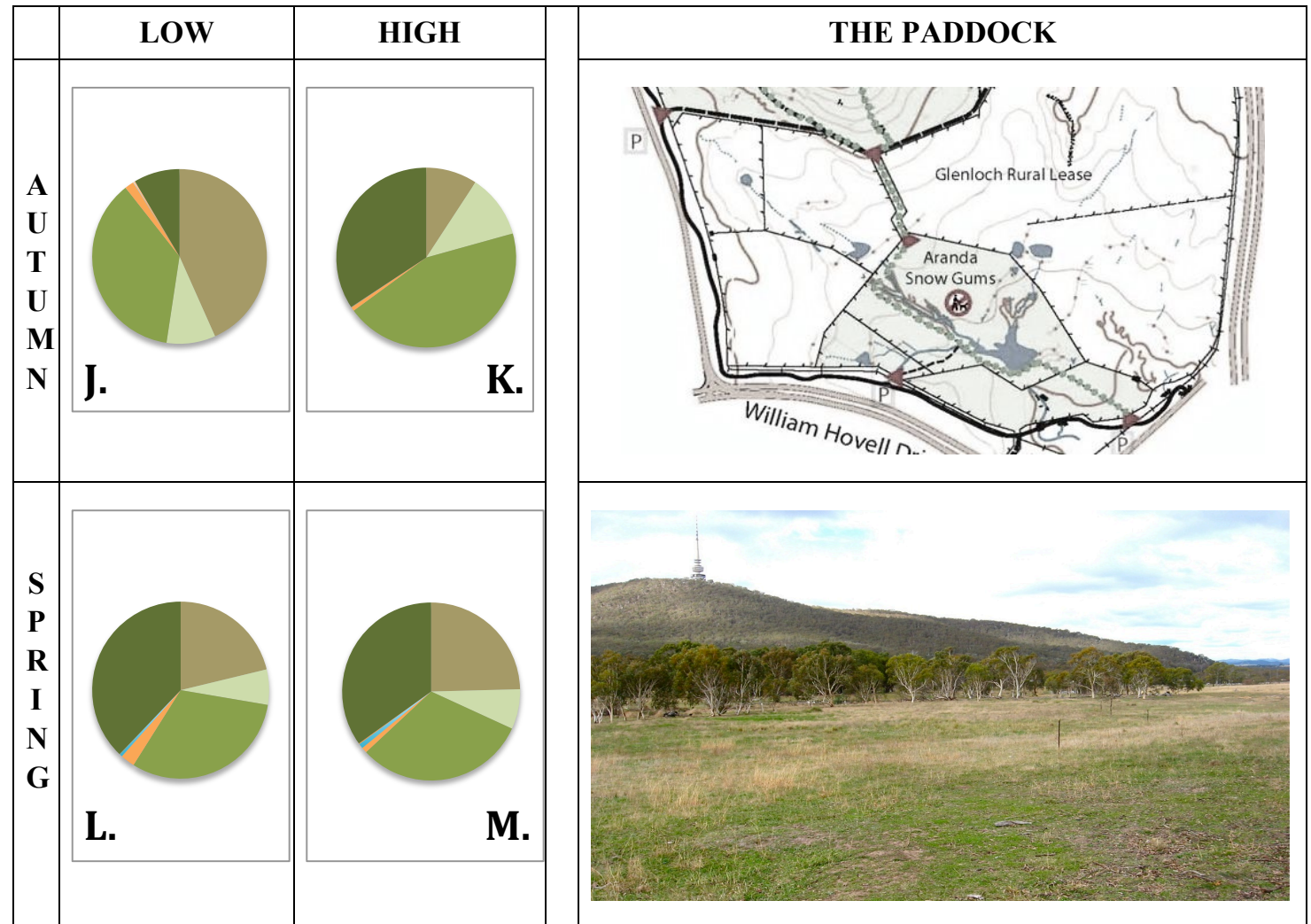
Shows:

a) For Autumns:

Couple of marked differences: Low had >5x unvegetated and only 1/3 of other-BL, which suggest that broadleaves generally die-back from poor summer rain. However not for our weeds, SJW even showing more presence in the dry.

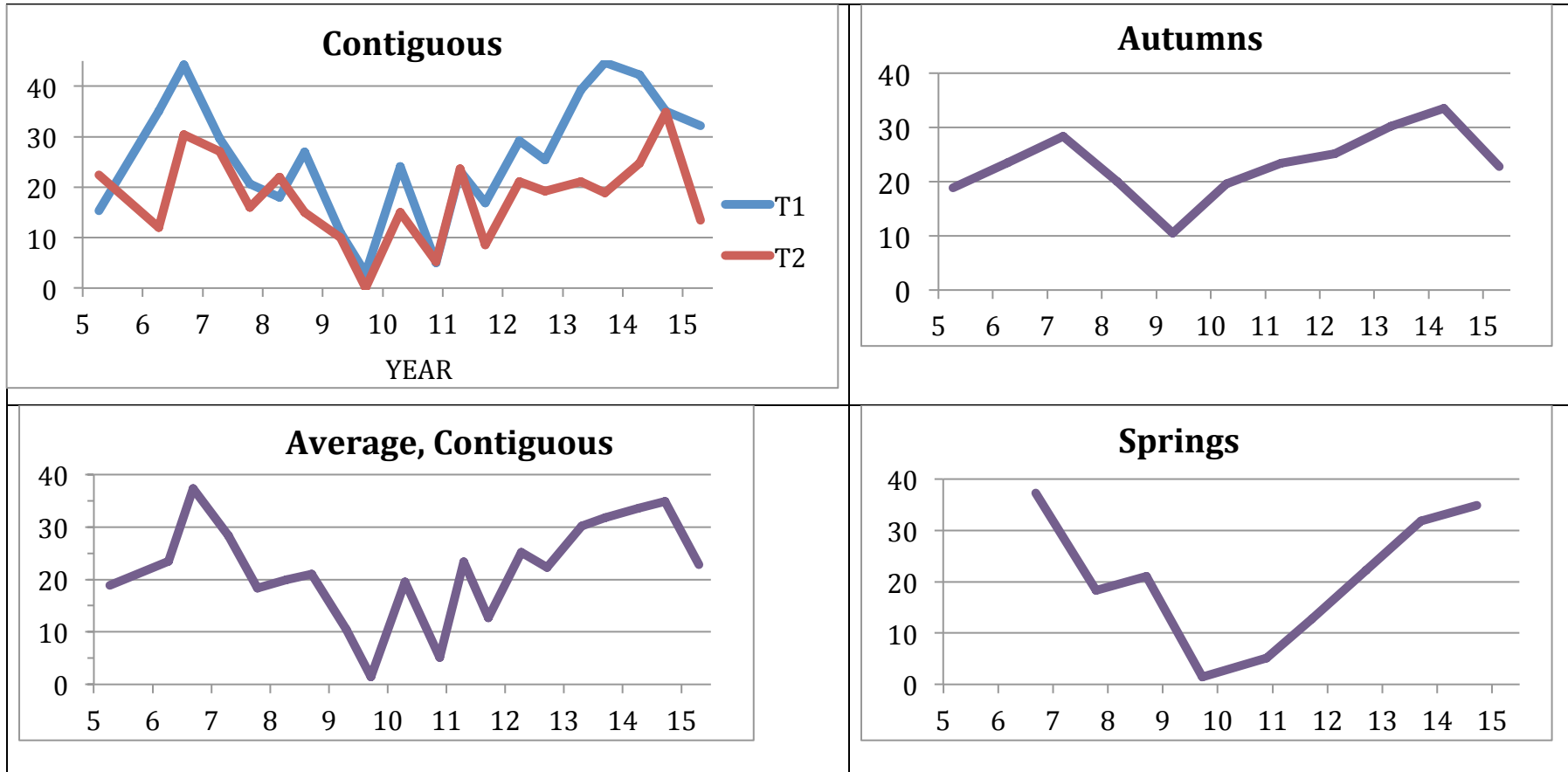
b) For Springs:

Couple of slight but intriguing differences: Low had less unveg. and even more SJW, which latter again suggests that it competes better in dryer soil.



\* 3-months-before yielded virtually identical results (despite 2 of the 8 extremes being different).

**ADDENDUM: Closer inspection of % Phalaris in Transects 1 & 2 ('richest' of the 6).**



Prior rain:	Lowest	Highest
Autumn	2006	2012
Spring	2008	2010

**Comment\*:**

- Slightly-higher average in Autumn (23.3 vs 20.6)
- Spring variability >twice (2.3x) Autumn's
- Separating the seasons smooths-out the fluctuations, but their troughs and peaks don't comport with prior-rainfall extremes.

\* bearing in mind that Spring has 2 fewer samples