WEEDS IN RIPARIAN AND WET AREAS CMN WORKSHOP 5.8.11

Today I intend to pose a raft of questions. 'Weed' too readily translates as 'bad' and the reflexive response is 'weed - remove it!'. And one leaps into action without further reflection. If only it were so simple!

I hope these questions will open up a dialogue with this landscape as it is, as it was, as it might become. There is as much work to be done in our heads as in the landscape. And much of this work must be done before we ever pick up a mattock or a spray gun.

Where are we? Locating ourselves in space
- geology determines soils and therefore flora
- geomorphology, the shape of the land
- hydrology - where does the water come from, where does it go, how much?
- aspect
- climate - its variability, likely future changes.

Extreme events such as frosts, heatwaves, fires prescribe the limits within which plant species can survive. As far as possible these must be taken into account in all rehabilitation work. A planting might endure for years then be wiped out by an extreme event, wasting years of effort
- What is the vegetation community on the site as determined by the above factors - Bega wet shrub forest in this case
- NB the close proximity of this site to Bega, a major weed reservoir. This won't change!

When are we? Locating ourselves in time
- history of the landscape and property, what has shaped what we see?
- what future is envisaged for the property?

What processes are under way?
- what will likely happen without intervention? Sometimes our goals will be achieved with minimal intervention provided we can be patient as processes take their course
- how much natural recruitment of native species is under way?
- what is the state of existing vegetation? -healthy or declining?
- which weeds are spreading, which seem to be declining?

What landscape do we think we want?
- Why?
- What are its key elements?
- Are there particular species we wish to support/re-establish - a plant, a bird, an amphibian, an insect.
- What are their requirements?
- Are their exotic species which we want to retain for aesthetic, economic reasons?

Can we reconstruct the pre-European landscape on this site?
- what evidence? geology, pedology, remnant vegetation on site, index sites comparable to our site but largely intact
- NB it was surely dynamic in relation to on-going climatic change and modified by Aboriginal impacts

Can/should we re-establish it?

If we do it is likely to be a life long commitment - due to the longevity of weed propagules, the certainty that new weeds will keep arriving.

Will it set up a high tension with countervailing processes such as weed invasion?
Have we the resources and energy for this goal or do we prefer a less ambitious one?

What is missing from the current landscape? - flora/fauna
Is it feasible to re-introduce missing elements?

What is the role of livestock on the property? Now, in future?
How do livestock impact on weeds - control or spread them?
How do livestock impact on native vegetation?
What is the difference in impact between horses, sheep, goats, cattle etc?

What is the ecological role of the weeds that are present? Who benefits & who suffers
- food source
- soil stabilization
- shelter
- harbor for pest species
- impeding regeneration

Many native species are now utilizing and even heavily reliant upon exotic species. A purist approach with removal of all exotic plants per se may impact heavily on native birds, insects etc. A weed crop may provide a nursery where native species re-establish. It may also (eg smothering vines and mat-forming grasses) preclude all possibility of recruitment of native species.

Why are riparian/wet areas weedy?
Many weeds are originally from areas with high nutrient and moisture levels, riparian sites are closest to their natural habitats.
Disturbance)floods)favors weeds, bares the ground.
Streams and roads function as weed conveyor belts - what is growing upstream?

How can weeds be ranked?
- high risk, low risk, obligatory control, nursery crop, ephemeral, transformer etc

Developing a management plan
Answering the questions I've been posing should allow a property management plan to begin to jell. It would include:
- a vision of where we hope to get to
- a hierarchy of priorities for action, key target weeds and weeds that can be ignored, key species to be established
- a sense of the resources required, the levels of effort, the duration of the project

The full answers to the questions I have posed are unlikely to be readily available from experts, though expert advice should certainly be sought when available. Essentially we each have to become experts on the sites under our stewardship, keen long-term observers of the landscape processes under way, careful recorders of what we observe. We need to explore the various weed control and rehabilitation techniques to determine what best suits our site, our budget, our inclinations. It can be a most satisfying learning experience and we will learn much from others engaged in similar projects.

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