Swan Bay Environment Association Inc.

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The habitat value of local vegetation by Elizabeth Ross (*Talk given to the SBEA AGM 25th February 2011)*

I have summarised the content of my presentation by cutting and pasting from the PowerPoint presentation I gave on the night. As I spoke off the cuff I apologise that this is not a complete record of the talk. If you would like a copy of the presentation then you may request it by email eross@gordontafe.edu.au. I may also be able to respond briefly to some questions.

Habitat is where an organism lives. Habitat should provide:
1. **Food** which could be in the form of; Leaf/stem/wood/roots, Flowers/nectar/pollen, Seed/fruits, Sap, Leaf litter/decomposing material, Animals –the food chain
2. **Variety** –the habitat needs to have the appropriate biodiversity to provide this material all year round or for the whole lifecycle of the relevant organisms.
3. **Reproductive opportunities** which generally means that there should be; Nesting space, Nesting materials, Courtship opportunities(space and structures for this), Incubation/development/nurseries
4. **Shelter** from Predators, The elements –wind, rain, insulation, etc
5. **Succession/Change** Fire , Flood, Storm, Cyclone etc Almost all ecosystems have evolved in an environment that is event driven to maintain the biodiversity
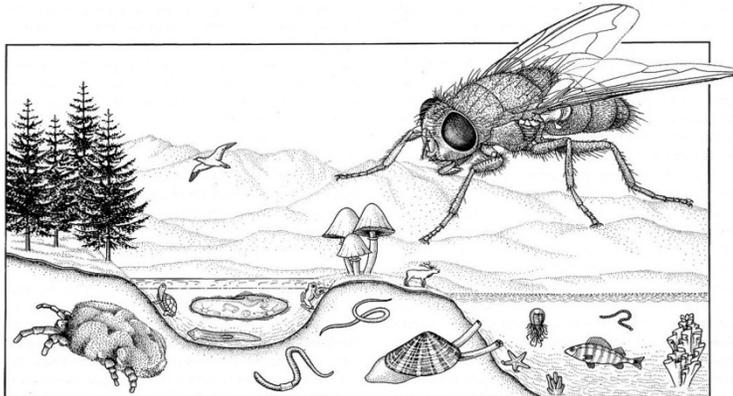
1 Monera (bacteria, blue-green algae)
2 Fungi
3 Algae
4 Plantae (multicellular plants)
5 Protozoa
6 Porifera (sponges)
7 Cnidaria (jellyfish, corals, etc.)
8 Platyhelminthes (flatworms)
9 Nematoda (roundworms)
10 Annelida (earthworms, leeches, etc.)
11 Mollusca (snails, bivalves, octopus, etc.)
12 Echinodermata (starfish, sea urchins, etc.)
13 Insecta
14 Non-insect Arthropoda
15 Pisces (fish)
16 Amphibia (frogs, salamanders, etc.)
17 Reptilia (snakes, lizards, turtles)
18 Aves (birds)
19 Mammalia (mammals)

(Gullan & Cranston 1994, p. 6). Wheeler, W.C. (1990) Insect diversity and cladistic constraints. *Annals of the Entomological Society of America* **83,** pp. 91 – 97.

Speciescape, where the size of individual organism is approximately proportional to the number of described species in the higher taxon that it represents. (After Wheeler, 1990)

Ecological Vegetation Classes or EVC's   Are part of a classification system developed in Victoria in the late 1990's for describing natural areas. They are benchmarks that model assumed pre-European settlement, of vegetation types and the quality thought to occur pre settlement – in the year 1750. There are about 300 EVC's in Victoria; they represent the average characteristics of 'mature' long-undisturbed ecosystems. The DSE Geospatial Data Library was used to assign EVC's using geological, geographical mapping, satellite imagery, historical records and surveys.

This data with assumptions, extrapolation and educated guesses was used to assign 1750 EVC's. EVC's are always described according to the local Bioregion. Local bioregions include;
                        VVP – Victorian volcanic plain and OtP – Otway Plain

Some examples of local EVC's are;

        EVC1 Coastal Dune Scrub/ Coastal Dune grassland Mosaic ; EVC48 Heathy Woodland;
        EVC175 Grassy Woodland; EVC55 Plains Grassy Woodland

One of the most important uses of EVC's is to assess the quality of vegetation. A common assessment program is Habitat Hectares. An ecologist scores vegetation by comparing it to the described EVC and allocates marks out of 100. This is a very onerous and complicated task but the summary of the components of the score is:

Large trees	10	Regrowth/regeneration	10
Tree Canopy	5	Litter	5
Understory –strata/diversity	25	Logs	5
Lack of weeds	15	Landscape-size/closeness/shape	25

Thus we can numerically measure or rank how good vegetation is at providing habitat.

You may wish to use the interactive map on the DSE website to look at local EVC's. http://mapshare2.dse.vic.gov.au/MapShare2EXT/imf.jsp?site=bim Zoom into the area of interest on the map, when you are using a small enough scale you will be able to tick the vegetation box and the EVC's will appear –play and learn from there. Remember not to be tempted to use EVC's as a plant list –this is **definitely not** what they were designed for!

I then discussed some local examples including:
    ***Bursaria spinosa** supports a great variety of insects: A parasitic wasp that controls Christmas beetle. Provides habit for the Eltham Copper Butterfly and many other insects. It is a good nectar and pollen source. It also provides spiny thickets for birds.* For humans it provides great Honey, Aesculin a chemical to identify bacteria *and has* a chemical used in sun block.
    Superb Blue Wren – is a survivor! But has specific habitat requirements. It is gregarious and copes with urban life. It does need insects, thickets for nesting, less than 30m between large shrubs, protection from cats/foxes, tall shrubs/trees for roosting.
    Golden Sun Moth Fact Sheet – refer to DSE
    http://www.dse.vic.gov.au/__data/assets/pdf_file/0014/103406/Golden_Sun_Moth_Fact_Sheet.pdf
    Southern Brown Bandicoot Fact Sheet – refer to DSE
    http://www.dse.vic.gov.au/__data/assets/pdf_file/0010/103420/Southern_Brown_Bandicoot_Fact_Sheet_V7.pdf