

April 2011 in our Catchment

It has become very dusty lately; perhaps we could do with a few days of rain. The weather has been really very pleasant, and the state of the waterways is really very good, even if there are streamers of algae about. Out in Tallaganda State Forest, the floor of Yandyguinula Ck was a carpet of the maple leaves of one of the water buttercups, the paired spoons of Starwort on top of the water and masses of Brooklime poking out.

Your Results

With half the reports in the picture this month is of a catchment in quite good health, with a few on-going niggles. Water temperature is dropping, especially outside the built-up areas and the sampling points at causeways where the riparian cover is gone. The acidity or alkalinity of water depends primarily on the country rock, but is also easily disturbed by construction or road-works ... only one 9.0 so far this time, and that at Wells Station Rd. In the Carwoola district, in Burra Ck and along Jerrabomberra Ck the electrical conductivity continues to reflect the high mineral content of the local soils ... not salt so much as lime and similar things. The contrast between the upper part of Sullivans Ck, where the reading was $690 \mu\text{S}\cdot\text{cm}^{-1}$ and that for Flemington Rd pond, just down stream ($160 \mu\text{S}\cdot\text{cm}^{-1}$) helps to support the development of in-stream wetlands to improve water quality. There is more to do yet, but the signs are hopeful! Only Lake Burley Griffin has muddy water at present. Dissolved Oxygen and nutrients are at satisfactory levels, and the algae are either silkweed where there is little cover by this time of the year, or diatoms where the flow is gentle ... just what you would predict for autumn. Thanks to everyone!

Four Pretty, Dangerous Water Plants

The recent interest in Mexican Waterlily (*Nymphaea mexicana*) is understandable, and long overdue. The waterlily clumps have been loitering in the channels of Jerrabomberra Wetlands for some years. It is also found in a few small wetlands, and a well-known roundabout around the city. The plant is a problem because it is an exotic growing in a catchment area, because it forms clumps to the exclusion of all other wetland plants and because it is very nearly impossible to eradicate. Most waterlily species and hybrids have branching, tuberous rhizomes that form in the upper few centimetres of mud on the floor of a pond or billabong. They are robust but quite easy to lift and clear if that is required. *Nymphaea mexicana*, but not the yellow hybrids derived from it, has a very different rhizome indeed. The rhizome is conical, descending and may penetrate up to a metre into the sediment on a waterway floor. It is also very long lived. In addition, *N. mexicana* will self-propagate from stolons, setting down a descending rhizome at each node, and may also produce viable seed. Seed has not been reported often in Australia.



Iris pseudacorus flower.

Yellow Water Flag (*Iris pseudacorus*) is a spectacular feature plant in a formal water garden, but a decided pest along the banks of a catchment stream. In Adelaide, along the edges of the Torrens Lake in the centre of the city, yellow water flag clumps were established not long after the weir was constructed. These clumps have become old and woody and have, at times, excluded other, native emergent clump-formers from getting established. It is a major exercise to contain the water flag and revegetate the banks. Water flag looks great in the courtyard of University House, but would not be an asset to the flora of the lower part of Sullivans Ck, let alone along the edges of Lake Burley Griffin.



Yellow Water Flag as a specimen plant, ANU

Blue Flag is also an eye-catcher. The one that has escaped into the bulrushes at Jerrabomberra appears to be *Iris versicolor*. It also has turned up around the edge of Isabella Pond. Like its yellow European relative, this vividly blue flowered North American does well in a contained space, but can so easily become weedy in a waterway. They are drought resistant when established and grow from seed. The vagrants in Teatree Close Retention Pond are contained and having to compete with *Typha orientalis* and *Schoenoplectus validus*, two vigorous locals. It is the possibility of seed getting down into Lake Jerrabomberra and beyond that poses the risk.



Iris versicolor amongst *Typha*

I have a soft spot for Pickerel Rush. It was one of my early purchases for a water garden I made when I was a high school student. The blue flowered common one (*Pontederia cordata*) is weedy, forming large clumps in swampy ground and spreading by fragmentation. Even in the eastern United States, where it is native, it can turn feral. There is a patch in the drain-line between Entomology and the Botanic Gardens on Clunies Ross St. It would be a pity if it spread further, but it is only mildly frost tolerant.

Calendar

May sampling weekend

21st and 22nd May

Don't forget: you can get fresh calibration fluid from the Cassidy Arcade office NOW!

Stephen Skinner

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