



Humans can continue as the planet's most successful weeds, but only if we stop wrecking the place.

TECHNICALLY, only plants can be weeds. But plenty of other organisms are similarly vigorous, adaptive to circumstances and resilient in the face of discouragement. They, or rather we, are metaphorical weeds.

Weeds in the plant world thrive in adversity. Unwanted, maligned and attacked with murderous intent, they nonetheless survive and prosper.

Some weedy plants prevail because their scientifically manipulated agricultural and ornamental competition is poorly suited to the field (or lawn) of battle. But the most common secret of weed success is being versatile, aggressive and prolific. Top weed performers are typically generalists, capable of getting a foothold in disturbed environments, thriving under a diversity of conditions.

These are not qualities unique to herbaceous plants. Rats, cockroaches and influenza viruses are as capably weedy as kudzu, ragweed and European buckthorn. And humans – as a species of globally spreading two-legged opportunists – are clearly now the most successful weeds on the planet, the reigning champions, the Big Weed. Unfortunately, our title is in jeopardy because we are abandoning weed skills and wrecking the grounds (and waters) for our success.

The problem and perhaps the solution lie in our large brain. All species have strategies for surviving and thriving. Many species specialize to fit a niche and hope that niche will remain. Successful weeds favour generalist adaptability that lets them thrive in many places as hardy pioneers and gritty occupiers.

Humans have succeeded as adaptive generalists. But we have extended our range more by applying our brains than by adjusting our bodily capabilities. Cultural diversity and technological manipulation

have helped us occupy most of the world, appropriate an impressive volume and diversity of resources, and alter most niches to suit our interests.

Whether such accomplishments should ever qualify as success is open to question. Even for weed champions, however, a sustainability test applies. And we are failing

least really bad at responding usefully to the perils that lurk there).

What was once a successful generalist strategy in a resource-rich world has become a form of overspecialized dependence on an approach that is undermining its own viability. That is not the behaviour of a champion weed that hopes

What was once our successful generalist strategy in a resource-rich world has become a form of overspecialized dependence on an approach that is undermining its own viability.

that test because of incompetence both as weeds and as big-brained creatures.

The basic genius of all weeds is to stay flexible and adaptive. We have instead allowed our core adaptations – technical, financial and political – to combine at all scales from the local to the global so that we now have a single, fractious but intricate planetary network of advanced tools, interlocked economies, constant communication and overstretched administration.

This big apparatus is messy and wobbly but unquestionably powerful. The fate of most creatures and communities, including ours, depends on its movements and effects.

It is also single-minded. Despite considerable diversity in means and expression, the dominant local-to-global activities serve an agenda that has increasingly locked us into ever more exploitation of resources involving ever more demands on our basic life support systems – climate stability, biodiversity, groundwater, etc.

And it is really bad at looking ahead (or at

to retain the title. That is a big-brained weed being stupid.

Becoming a better weed entails adapting to current circumstances, re-establishing our generalist capacities and applying them to enhancing livelihoods while also restoring life support systems.

Doing that involves looking ahead and choosing new paths and strategies. It requires thinking, experimenting and rethinking. Not many living beings can do that. Cockroaches and kudzu lack the cerebral wherewithal. Most humans don't get to apply much of their wherewithal to such matters. Moreover, our species has precious little experience with thinking far ahead at a planetary scale.

Nonetheless, we can rise to the occasion. We do have the big brain. It seems to be one of the few available resources that we have underexploited so far. And we have a title to defend. **AV**

Robert Gibson is the chair of AVJ's editorial board and a professor in the Faculty of Environment at uWaterloo.