

THE USE OF AN ICON SPECIES TO RAISE AWARENESS AND IMPROVE AQUATIC HEALTH

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The Tasmanian Giant Freshwater Lobster (*Astacopsis gouldi*) is the worlds largest freshwater invertebrate (therefore the worlds largest macro, try picking it with tweezers), it has been known to attain a weight of more than 6 kilograms and reach a metre in length from outstretched claws to outstretched tail. The Lobster is used as an icon species to promote, preserve and rehabilitate the catchments of Northern Tasmania. The Lobster is the critical animal in the effort to gain larger riparian buffer zones and high significance conservation areas in catchments within its known range; it is promoted whenever waterway health is an issue within our region. The Lobster has generated extremely strong feelings and debate within the wider community, it is my opinion that without this icon species to promote healthy waterways, the community interest may not have been sufficient to generate massive changes in the way we regard our catchments, and the changes that have occurred since the rise to prominence of the animal.

This presentation aims to show other communities Australia wide, how effective and important an icon species can be in instilling pride, ownership and awareness of our inland waterways. There is no unit of measurement for community attitudinal change; therefore this presentation can only show what has occurred over the last decade and highlight the role of the Lobster in this period. Facts and figures rarely sway the general public, showing animals with big claws seems to work better. In other regions a big fish (Barramundi, Murray Cod) or another crustacean (Marron, Murray Crayfish, Mudcrabs) can be used to assist all the flora and fauna in the catchment.

The Tasmanian Giant Freshwater Lobster, A Summary

Extract from Lobster Report Patterns of Abundance of the Giant Tasmanian Freshwater Lobster (*Astacopsis gouldi*) in Relation to Habitat (Walsh and Nash, 2002)

The Tasmanian Giant Freshwater Lobster (*Astacopsis gouldi*) is the largest freshwater invertebrate in the world. The Lobster is only found in the North of Tasmania and has been recorded at weights exceeding five kilograms. The population of the Lobster has been dramatically reduced during the last half century. Excessive fishing and habitat destruction has all but made the animal extinct in some areas of its former range, with many other areas experiencing severe population declines.

The major habitat requirements of the Lobster are low in-stream siltation levels, significant amounts of woody debris with adequate replacement debris, and an extensive riparian zone to supply the replacement woody debris, food, shade and to act as a siltation filter system.

Awareness raising of habitat requirements is essential for the ongoing maintenance and repair of catchments. Landowners and land users must be made aware of the habitat requirements of The Lobster. The protection of headwater streams and other class 4 streams must be reviewed, as current practices are detrimental to the habitat of the Lobster. Selected groups of Class 4

streams and headwaters must be given greater buffer zones to fully protect large areas of the catchment downstream.

Disjointed areas of protection are not adequate protection measures. Protected areas should have a large area of headwater streams and all stream classes. Quality areas such as whole rivers or catchments must be a priority for higher protection. There are near pristine catchments with excellent populations and habitat, which can be given higher protection immediately. The buffer zones on these catchments should be widened significantly to the potentially dominant tree height.

Poor land clearing practices have raised temperatures of many waterways to almost lethal limits for the Lobster in summer periods. It is vital that areas with little or no canopy be replanted to prevent the possible loss of many populations in downstream areas. Siltation entering catchments must be minimised to maintain the essential habitat for the Lobster. To achieve this will require review of current land management strategies. Forest practices must be monitored and reviewed to minimise impact on catchments.

Stock access is being prevented on a wide scale, due to Riverworks etc. A statewide education program would further assist farmers to provide options for stock. Land clearing practises such as riparian removal and ploughing must be reviewed. There are no buffer zones imposed on agriculture, this will continue to impact on the catchment health unless reviewed. Better ploughing methods such as buffer zones and the addition of mulch (ripper mulcher) should be considered.

The introduced Willow tree (*Salix fragilis*) must be cleared from riparian zones to prevent siltation, nutrification and to increase macro-invertebrate food supply. Every effort must be made to eradicate the willow. Full catchment clearing and replanting schemes must be implemented to restore the catchment health. Juveniles require more macro-invertebrates for food and as such are even more sensitive to siltation and therefore the effects of willows.

River Protection Pre Lobster Focus

In 1994 there was only a fledgling Waterwatch network in Tasmania. Riparian Zones to most people was something on Star Trek and catchments were ours to do with as we pleased, and we did..... There was a bag limit of 12 male Lobsters per day, and the only time Lobsters were mentioned in the media was when somebody captured a large specimen. The health of our waterways was not a major issue, nor was the manner in which we used our water. This of course was not only confined to Tasmania, and water has become a major issue Australia wide without the Lobsters influence, however, the dramatic changes in Tasmania can in no small way be attributed to the rise of this icon species.

Riparian Buffer Zones were in their infancy, with land clearing to the waters edge still commonplace. There was certainly no mention of Lobsters when it came to any land clearing issues, unless the person clearing the land picked up a few for dinner. We could put excavators in the river to straighten the bloody thing out as it was too windy and caused flooding (not that building towns near major junctions and floodplains has ever been a problem in Tasmania). Car bodies were buried in rivers, and logs were a real nuisance to anybody with plans for the available water, so we took them out. Rivers were water carriers and not much else.

What Happened Since?

Media coverage and public attitudes

The media coverage of the Lobster has increased dramatically since 1994. There have been reports in national and international magazines and some major dailies, concerning the problems faced by the Lobster and its habitat. There have been front-page stories concerning waterways with serious issues; the Lobster again, is the focal point. From Acid Mine Drainage to Forestry issues, poaching, rehabilitation of waterways, Waterwatch field days, introduced species (yabbies), Government cronyism, Environment awards, recovering populations, large specimens, Lobster sculptures, NHT research and awareness grants, lobsters found in unusual places (beach, outside the take-away shop), school talks, water expos, agricultural field days (AGFEST), agricultural shows and numerous smaller events, the Lobster is there, focusing the public's attention to the animal and its habitat. In 2004 the media is closely following the Giant Freshwater Lobster Recovery Plan and the attempts to have forestry buffer zones widened on all smaller creeks, which may contain Lobsters. The Federal Minister has even taken a personal interest in the situation, which is certainly significant.

Forestry operations

Forestry operations have changed significantly; there are now streamside reserves on all stream classes. These reserves are expanded further in some areas if it is an area containing Lobsters or Lobster habitat.

	Class 1 (Larger Rivers)	40m
	Class 2 (>100ha)	30m
	Class 3 (50-100ha)	20m
No Lobsters	Class 4 (<50ha)	0m
No Lobsters	Class 4 (<50ha) (Machinery exclusion zone only)	10m
<u>With Lobsters</u>	Class 4 (<50ha) (If containing suitable Lobster habitat)	10m
<u>With Lobsters</u>	Class 4 (<50ha) (If a known Lobster site is inside coupe) (Forest Practices Code 2000).	30m

Members of The Giant Freshwater Lobster Recovery Team have debated a streamside reserve of 30m for all smaller stream classes containing Lobsters, but there is now "debate" at the highest level between Government and Forestrywatch this space!

The Forest Practices Board must now assess all coupes within the Lobsters range and the coupe location cross-referenced with known Lobster sites. On occasion, a survey may be carried out to determine habitat and presence/absence. *An independent assessment is the next step. Training days have been carried out, to educate forestry planners etc about Lobsters and their requirements. Public scrutiny has tightened up many operations; media awareness quickly highlights major breaches, however much of this industry is kept behind locked gates.

Agriculture

All new and extended agricultural dams are now processed through the Water Management Branch. If Lobsters are thought to be in the vicinity of the dam or immediately downstream, then a habitat assessment and/or population survey is required. If Lobsters are found and the dam is still approved, then the Lobsters must be relocated upstream if possible before works are to commence. You cannot put the excavator in the creek any more Jack.

There has been an overwhelming response from the general public concerning the illegal overuse of water; Lobsters again are the animals most mentioned. In late 2004 a 20ML farm dam collapsed, destroying 2 km of creek. Remediation work specifically designed to encourage Lobster repopulation is to be carried out. It has been recommended that qualified personnel, to ensure a repeat of this does not occur, regularly examine all dams in Tasmania. This is mainly due to one animal. Environmental flows are being determined statewide, with Lobsters again being a very significant animal.

So What Happened In The Middle Ages?

Lobster awareness increased dramatically in the mid to late 1990s. Media coverage went from one story a year to front-page headlines, letters to the editor, anecdotes etc. A juggernaut began to gather momentum. A Lobster Landcare group was formed with up to 70 members at one stage, the group served a purpose; it united many people with the same concerns into one voice. The group is still represented on the Recovery Team, which was formed in the mid 1990's. Lobsters were being shown in schools for the first time, and at other events where the general public attended in large numbers (AGFEST 60 000+ annually). In many cases the lobsters were the star attraction, with many locals unaware of the animal in their "back yard" and many others unaware that they did grow bigger than a yabby. Television expanded the Lobsters reach even more; the largest specimens were shown on the news, with the conservation message always present. Fishing shows (Hook, Line and Sinker) and travel shows (Getaway, The Great Outdoors) and even 60 Minutes featured the Lobsters and their habitat.

Waterwatch, Landcare and other groups also began to gather momentum at this time, Federal funding increased due to the part sale of Telstra. Many people wanted to be a part of the new programs; many people saw them as an opportunity to do something for the environment. Timing is everything and the rise to prominence of the Lobsters was very strategically accidentally timed to coincide with the largest shift in public attitudes to the environment in possibly the history of Australia.

The public of Northern Tasmania began to associate rivers and creeks with Lobsters, Rivercare works that were undertaken, always mentioned improving Lobster habitat as a major aim. Schools jumped at the opportunity to get involved in Waterwatch, as it dealt with local animals and local issues. Lobsters became integral with Waterwatch in the North West Coast, children involved in Waterwatch got a chance to see the Lobster close up. I don't think its possible to overestimate the effect "spectacular" animals have on children. Lobsters were "fashionably sexy" as one disgruntled reader put it, when the Lobster work was awarded a state environment award. How quickly they forget.

As I was heavily involved in the Lobster project with Inland Fisheries and Waterwatch, I possibly noticed more of the change in public attitudes than most. On less than 5 occasions in 10 years have I been verbally abused about the attempts to promote Lobsters and protecting and restoring aquatic health, (which is not bad after dealing with more than 100 000 people). The reaction from the public has often been one of "look after the creek and river and the Lobsters..... but Greenies are bad". This attitude needed to be carefully considered when adopting a strategy to keep the general public on side. People generally want to protect the bush and the animals; it's a matter of letting them say that instead of being constantly told by "outsiders".

Promotion Of Positive Stories And Siding With The Masses

The general public will get tired of evangelism, whether it is religion or “extreme” conservation. Many people over the years have had the right attitude but possibly the wrong approach when it comes to gaining public acceptance for their ideas and philosophies. The Lobster has always been promoted as the “peoples” animal and not the sole property of the minority. Lobster stories were carefully steered away from the confrontational style of some and just presented as Tasmania’s unique world-beater. Lobster stories initially consisted of rehabilitation work on waterways, kids learning about animals their grandparents ate, people reminiscing about the thrill of seeing a big one in the creek 30 years ago, large populations being found in the remote areas and how the ban on fishing has been helping the repopulation in general. People take pride in collective achievements (AFL teams, Australian Olympic games performances) so any recovery of the Lobster and its habitat was a source of pride for the community in general. To promote all the negatives early on may have been detrimental to the recovery process, by 2001 the Lobster was possibly the animal most featured in the Tasmanian media. The Lobster will never compete with the Thylacine or Tasmanian Devil, but I believe it sits firmly behind these 2 animals as a Tasmanian icon, more so perhaps in its native state than on the mainland but it is in Tasmania where the majority of assistance and change is going to occur.

Rehabilitation efforts by community groups, farmers and government-sponsored organisations have increased on a massive scale in Tasmania. Public opinion is firmly behind the animal, as it strikes a chord across the community. Lobsters are recognised as the flagship or icon species for Tasmania’s inland waterways. There are other species of *Astacopsis* in Tasmania, and although they don’t grow as large as *Astacopsis gouldi* they are still “part of the family” and cover every waterway in the state. Lobsters are the driving force behind proposed conservation areas and larger riparian buffer zones. The public has recognised the need to have larger areas of waterway protected, especially headwater systems, again, this icon species has played the major role in gathering a strong voice. Put simply, the Lobster is the animal, which will spearhead the most protection and rehabilitation of the waterways in Northern Tasmania.

The Lobsters Future

The Recovery Plan has been given a boost by the intervention of the Federal Minister, who has basically said, “get it done!” As a member of the Federal Recovery Team for *Astacopsis gouldi* I have been involved in the official recovery process since 1997. A Federal Recovery Plan is usually drawn up and adopted for listed threatened species within 2 years. At this stage the Recovery Plan for *Astacopsis gouldi* has still not been formalised and presented to Canberra, after 7 years (possibly a record!). There are reasons for this but they come under one major heading: The remaining major areas of Lobster habitat is in Tasmania’s best timber country, and any changes to its protection status will have major effects on one of Tasmania’s largest primary industries. The ramifications of this are far reaching economically and I feel, even more so politically. The forest industry has not been a willing participant in many of the proposals to further the protection of the Lobster.

If the Federal Government is committed to reserving another 170 000 ha of the Tasmanian forests then I would hope that the proposed conservation areas (totalling approximately 28 500 ha) to ensure the future of one of Tasmania’s icon species (and the other aquatic and terrestrial inhabitants) would be considered a small, but extremely significant action. Less

than 30 000ha would be a massive assistance to the long-term future of the Lobster and the remaining intact habitats. I truly believe that it isn't taking too much of the timber country out of the harvesting plans and would hopefully be supported by the forest industry as well. In some cases the areas would just be extensions of pre existing conservation zones. Initial reaction has been better than expected, however, it's the "behind the scenes dealings" that cause concern. I would hope that at least some of these areas are given high priority, as the areas are small in comparison to many areas being asked for higher protection.

There will be streamside reserves where Lobsters occur, there will also be conservation zones specifically targeting Lobsters, the protection of the habitat will benefit the entire flora and fauna in the catchment it's just a matter of when, not if.

Icon Species And A Plan Of Attack

The Lobster has been unashamedly used as an icon species for Tasmanian waterways. The results speak for themselves. It is almost frightening to think what would happen to our waterways had we not had a focus species which could have political clout. People generally don't get excited about temnocephalins (apologies to flatworm enthusiasts of which I am one) or other "non-sexy" animals or plants. Icon species must be used to unite people in a common cause. There are people out there who wish to protect worms, flies, beetles, fungi, sponges etc; but they are usually too few to have a voice, which is to be listened to by the people that count (politicians! make no mistake, the louder the voice the greater the change). Icon species unite all these people into one larger voice, which is listened to by the powers that be. We cannot afford to be going in 20 different directions, when it comes to conservation. If the icon species is protected, then it stands to reason that all the other inhabitants are protected as well. The icon species is usually large, as people like big rather than small in their animals (name the top 50 popular children's animals and find the worm, tick or ant) and therefore need a larger area of protection, usually a sub catchment at least, with intact headwaters and large riparian buffer zones.

The Lobster makes certain members of the population grimace, as it's the one animal they cant easily dismiss, nobody wants to be seen closing down the local school, similarly nobody wants to be responsible for the demise of a local legend. Hard questions are being asked of our leaders in a very public forum. People are very ...very... interested in what is going to happen to "our Lobsters", as they should be. Icon species attract media attention, the politicians' lifeblood.

Icon species usually strike a chord with the general public; this is where your "voice" will come from. Everybody loves platypus, muddies, barra, marron etc.... so find the species in your area which generates the most reminiscing and go with it. Educate the public about its need for quality water and habitat. Have the older generation tell their stories, have the kids clamber over one another to see the animaland get the animal an agent! Media exposure tends to be self-perpetuating, put one or 2 stories in the local media about a local icon species....and watch the other stories come out of the woodwork. The animal must become what is known in media circles as a media tart, at every opportunity the animal must be presented to the public. Most people never get to see these animals, so a story in the paper or on the telly or a live show gets instant attention. Make no mistake though, it requires extreme dedication and persistence, there are setbacks and disappointments and then more setbacks and disappointments, but as long as the message is very simple and very honest, then people will listen.

I believe it is vital to include all people in the “campaign” instead of it being the responsibility of a minority. The Lobster lives in “timber country”, and yet is looked upon like a member of the family by the people carrying chainsaws in the bush, the farmers, the fishermen and the general public (as it should be, I sometimes wonder if many people underestimate the average person) and they are more than keen to see the animal return to its former glory. Alienating the people who need a job and will live in their local area all their lives is fundamentally wrong and divisive. Lobby the leaders by all means, but treat the workers for what they are, people doing what they have to do to put food on the table. I think it’s important to remember that everyone likes the bush and the animals, its just a matter of reminding them sometimes that it’s still out there and that it needs our help.

Good luck.

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References

Forest Practices Board (2000). “Forest Practices Code 2000”, Forest Practices Board, Hobart, Tasmania.

Walsh T & Nash W 2002. “Patterns of Abundance of the Giant Tasmanian Freshwater Lobster (*Astacopsis gouldi*) in Relation to Habitat”. Inland Fisheries Service, Department of Primary Industries, Water and Environment, Hobart, Tasmania.