

CORANGA-MITES: ACTION IN THE CATCHMENT

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INTRODUCTION

Coranga-mites: Action in the Catchment is a school program introduced in 2004 to provide curriculum-based environmental learning opportunities for children in the middle years. It operates through the school year as an eight month education program including water quality testing and additional activities.

It was introduced for many reasons to

- improve existing educational program structure
- improve time management of Waterwatch facilitators
- make Waterwatch part of the curriculum
- and reignite teacher enthusiasm.

Waterwatch facilitators spent a lot of time visiting schools only to find they were sometimes repeating activities to the same class. There was a need for a new program that teachers could conduct themselves. The Waterwatch staff would then be available to the teachers, in a support role, to facilitate special activities. A relevant program had to be constructed that would become part of the curriculum. To boost the enthusiasm of teachers and enjoyment of the students, the program had to be made useful, interesting and challenging. Further benefits include allowing teachers to plan activities in the field giving plenty of time to organise parent help and maintain adult/student ratios.

The Goulburn-Broken Waterwatch region has developed *Catchment Capers* incorporating regular water testing and educational activities. This was identified as a suitable working model that was adapted to include activities Corangamite students can do to make an improvement to their environment/catchment. For that reason, the program was given the name *Coranga-mites: Action in the Catchment*. The program is complemented by an eye-catching red spider mite as its motif.

PROGRAM DEVELOPMENT

Corangamite Waterwatch recognises the importance of regular water testing as a method of raising community awareness of water quality issues. This education program consists of monthly water quality monitoring and guidelines for interpreting the data. This allows the students to allocate a rating of excellent, good, okay or poor to each of the parameters.

Each month the water quality test is accompanied by an associated “Coranga-mite” activity. The calendar of activities is shown in Table 1.

Table 1 Calendar of monthly activities in program and the associated National activities.

| Month | “Coranga-mite” Activity | Allied National Activities |
|-----------|---------------------------|--|
| February | Teacher Education session | |
| March | Habitat Survey | Schools’ Clean Up Day |
| April | Street Sweeper | |
| May | Saltwatch | Waterwatch Salinity Snapshot |
| June | Action in the Catchment | |
| July | Plant Out | National Schools Tree Day |
| August | The Story of a River | Science Week |
| September | Macroinvertebrate Sweep | |
| October | Balyang Bonanza | Turbidity snapshot and stormwater activities in conjunction with National Water Week |

The June activity “Action in the Catchment” is an activity where the class is asked to take action to improve their local environment either at school or their monitoring site. The open-ended nature of this activity encourages classroom discussion and an imaginative approach to providing an environmental solution. The result may be as simple as a school yard clean up or more complex involving other agencies such as local council to do drain stenciling or develop a storm water management plan for the school.

The Coranga-mites Education Manual details the structure of the program. The document fully explains what we are testing, how the results are interpreted and class result sheets. The relevance of the program to the Curriculum and Standards Framework II levels 3, 4 and 5 in science, SOSE and technology is also shown. The Corangamite Field Manual details safety issues, sampling procedures and methodology. The physico-chemical parameters monitored include temperature, turbidity, pH, electrical conductivity and reactive phosphorus. Comments about the site are also recorded.

Monitoring data collected by the schools is sent to the Corangamite Waterwatch facilitators and recorded on the Regional Waterwatch Database. The results of the individual school’s monitoring are reported back to the school in a poster style format. The report displays which schools participated in 2004 and acknowledges the monthly activities that they took part in. Comments that the students submitted on their monitoring sheets help to personalise the report. Graphs of the school’s data including local rainfall statistics, temperature, electrical conductivity and turbidity measurements are plotted. If the school has not collected enough data (< four points) to graph, Waterwatch data from the Barwon River is included instead. Interpretive text is included to help the students understand the changes in the water quality parameters observed throughout the year.

Participating schools are thanked for their involvement. This is done by providing rewards to schools as results are submitted, and also by hosting an end of year celebration. .

Kits are collected and returned to Waterwatch for equipment stock-take and servicing. This is a change in practice from previous years when kits were serviced on-site. By removing the kit, the teacher is made aware that it will not be available unless they attend the February training session when it is reissued. This formalises a new contract with Waterwatch for the school year and initiates the program. This is also in keeping with the Corangamite Data Confidence Plan whereby “Standard 1” data generated by the schools is supported by annual training and equipment maintenance.

RESULTS

An education officer was employed to implement the program and to provide assistance to teachers throughout the school year. Teachers from interested schools in the region attended an information session at the beginning of the year and were instructed how to run the program. The aim was to “teach the teacher” so they could confidently measure the physico-chemical parameters and perform the monthly activities. The locations of the schools involved in the 2004 program are shown in Figure 1 below.

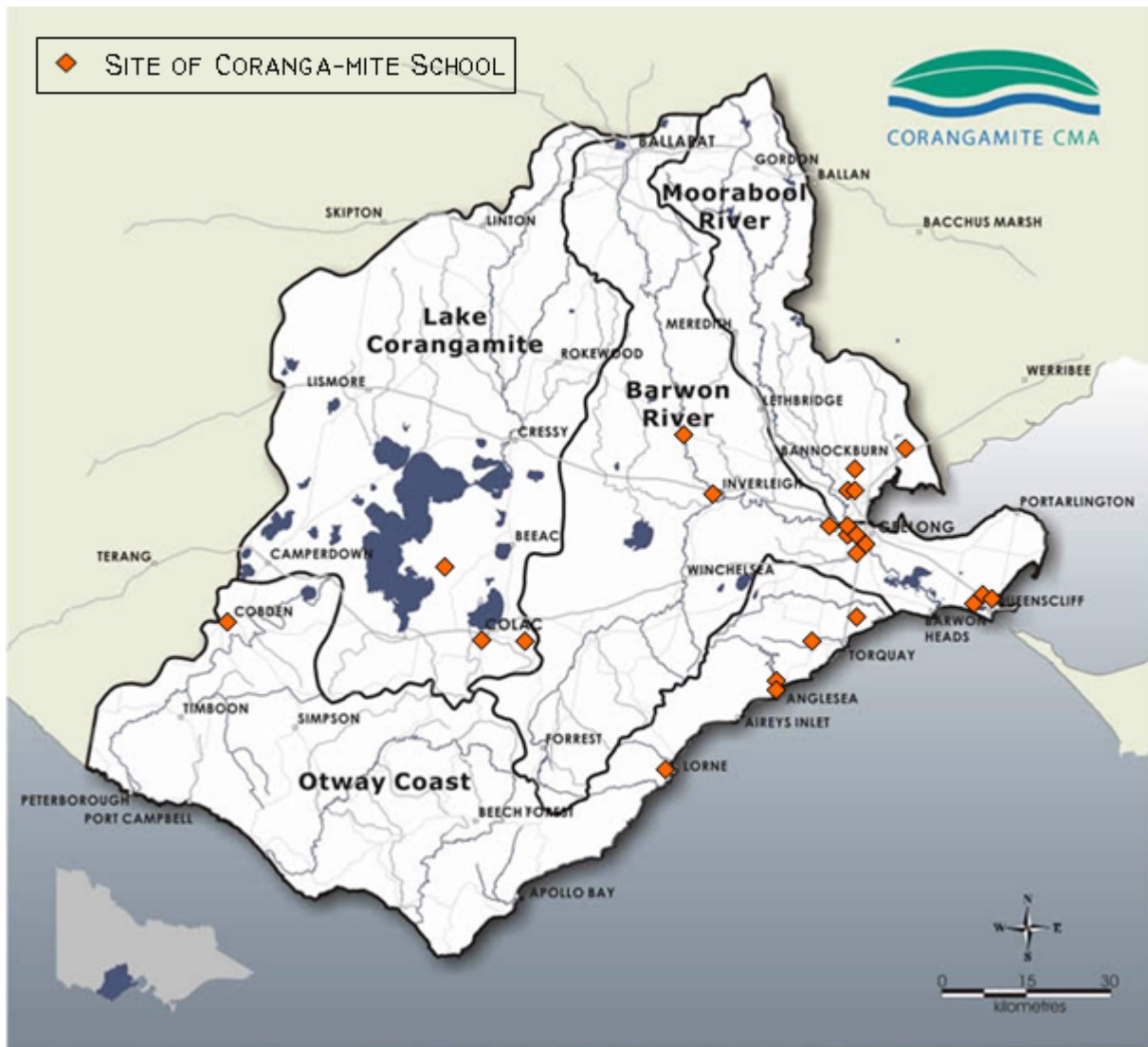


Figure 1 Sites of schools participating in *Coranga-mites: Action in the Catchment*, 2004.

There were 25 schools participating in *Coranga-mites: Action in the Catchment* in 2004 across the Corangamite region. The program has attracted Grades 3-6 in Primary schools and Year 7-9 in the Secondary schools. Some schools have been involved in Waterwatch monitoring for more than 10 years. The amount of monitoring had fallen but with “Action in the Catchment” those same schools are monitoring and participating in the monthly activities.

The monthly “Coranga-mite” activities were timetabled to coincide with special activities occurring on a National level. The schools involvement in the activity is likely to receive

more support because of the greater number of partnerships possible. For example, the July Plant Out coincides with the National Schools Tree Day. On July 23rd 2004, Mt Duneed Primary School, in conjunction with Surf Coast Shire, Barwon Water Community Tree Propagation Centre, Corangamite Catchment Management Authority and Corangamite Waterwatch planted grasses and trees at a local reserve adjacent to their monitoring site. National Schools Tree Day organisers provided supporting materials (transfers and certificates) and the local Toyota sponsor provided funds for a barbeque lunch. The good will generated by the cooperation of all the participants made this event a great success. Mt Duneed Primary School plans to make this an annual event.

Students at Geelong Baptist College discovered that the site they selected for water quality monitoring on Cowies Creek was badly in need of cleanup. That was when they decided to do "Action in the Catchment". Before the students could safely start the cleanup, Parks crew from the City of Greater Geelong had to remove 5 tonne of concrete and 2-3 tonne of assorted rubbish with a backhoe. The students could then return and clean up 15 rubbish bags of identifiable rubbish. "Clean up Cowies" was a huge effort by the year 5/6 students and was inspired by Schools' Clean Up Day.

Each time results are submitted for either water quality monitoring or monthly activities, the school were sent small rewards such as stickers, posters, and fridge magnets from Waterwatch or related authorities. To finish the year, participating schools were invited to attend a special educational event, the Balyang Bonanza. It was a large scale event (260 children in 2004) aimed to involve and educate the students about environmental values. It was held during National Water Week and was lots of fun. In 2004, Balyang Bonanza included activities such as stormwater games, demonstration of the ACE Stormwater trailer, drama workshop, frog and snake display, tree planting, and launch of the Corangamite Waterwatch Stormwater Trail at Balyang Sanctuary, Geelong by Tammy Van Wisse.

DISCUSSION

Teacher and student feedback has led to further development of the program in 2005. The majority of comment from teachers was positive, giving ideas for improvement and appreciation of the support given through the year. Teachers have requested access to data via the Internet for the students to analyse. Interested teachers have requested a quality assurance program for the school. Another request is a "buddy" system between Waterwatch schools to allow comparison of data across the region and within the state. The comments from the students emphasised the enjoyment in the "hands on" activities.

The schools are being offered more flexibility in the program in 2005. There is the choice of the full eight-month program or a "half-year" four-month program (term 1 & 2 or term 3 & 4). The half-year program can be made more intensive if the teacher chooses to include other environmental subject matter during that period. If more than one school chooses a half-year program this may have the further advantage of spreading equipment over more schools.

The monthly reporting of results means communication between the schoolteachers and Waterwatch facilitators is strong. We aim for the schools to be kept informed about the support offered in the program and bulk emailing or mail out to the schools is efficient and makes information available in a timely manner. Schools can also let us know what they need eg a Waterwatch facilitator to give extra training or conduct macroinvertebrate surveys.

The strong links developed between schools and Waterwatch facilitators encourage participation in other Waterwatch activities eg Waterwatch Snapshot days, Catch a Carp days, CMA Freshwater Circuses, the self guided Stormwater Trail at Balyang Sanctuary, Geelong and at Barongarook Creek, Colac (upcoming). The education program is promoted in the quarterly “Watchout!” newsletter. The Corangamite Waterwatch trailer is used at large events to provide workspace, equipment and to visually promote the program.

The level of participation in *Coranga-mites: Action in the Catchment* is on the rise. Interest that the program has generated has meant that the number of schools who wish to participate in 2005 is expected to increase 25%. We have also made the program available to other education organisations eg CREATE Inc (Youth & Community Services) and clubs such as scouting groups.

Although we encourage schools to participate in the Coranga-mites program, we recognise that it is not suitable for all schools. There will be teachers who prefer to invite Waterwatch into the classroom as one-off activities. These enquiries are welcomed, and are accepted depending on staff availability.

CONCLUSION

The success of this program is in its relevance to schools. The students recognise the importance of

- Stormwater issues i.e. litter from the street drain ends up on the beach.
- Water quality issues i.e. nutrients such as detergents from car washing can end up in the river.
- That their own activities can have positive, long term results eg planting riparian vegetation as a long term solution to river health issues.

Actions also encourage ownership of sites and river health messages are reinforced through the repeated monitoring activities. The term Waterwatch then becomes well recognised by students and means an enjoyable hands-on learning experience.

The education component of Corangamite Waterwatch has been reinvigorated by the introduction of regular activities and improved program structure. The result is increased monitoring events, a larger number of monitoring sites, greater group participation for schools in 2005 and stronger recognition of the Waterwatch program.

ACKNOWLEDGEMENTS

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