AAEE National Conference 2012

"Creating our next courageous steps"

This paper was designed to fit in with the following theme for this conference:

Towards ecological balance -
Contributing to our ability to encourage interconnection of humans and the environment.

Figure 1 : The 2011 Yaapeet Primary School Children in their Moonah tree in their school yard
(Yaapeet is in north west Victoria, next door to Wyperfeld National Park)

Children interconnecting with their local natural environment's features: observing, noticing, sharing and caring.

By Jeanie Clark, 2012

Part 1 Introduction

This paper will look at 'Creating our Next Courageous Steps' from the point of view of Yaapeet Primary School's children (Fig 1).

There are often hidden values in things we do, so I want to make mine clear for this paper, by asking

When I first read of this 2011-2020 United Nations Decade of Biodiversity's (UNDB), its vision that *by 2020 we (the people of the whole world) will be 'living in harmony with Nature'* , and the Aichi Targets which go with it, blew me away. I realized that I wanted to be doing things towards such a global vision – even if they were little things - and to encourage others also. It has inspired and been incorporated my teaching, including underlying this presentation and the achievements it describes at Yaapeet Primary School.

A Sense of Wonder at Nature

How can we prepare children to be able to take their 'next courageous steps'? From the 2012 Next Courageous Steps conference, two sets of behaviours were said to be needed: care/love and know/learn. Prof John Thwaites on Monday told us that we need to care for and to have knowledge about for behavior to change. Prof Sam Ham went a step further on Tuesday and said that loving leads to learning, which can then lead to a change.

How do we help create 'loving /caring'? For me, it is through encouraging a sense of wonder at Nature to develop. This implies interconnectedness between children and Nature. Repeat visits to get to know Nature, by noticing, observing, sharing and caring will help develop this. Where else to start but with Nature in the backyard, the school yard, the local environment?

Interconnectedness

At its simplest, interconnectedness is a two-way relationship with giving and taking on **both** sides. When applied to people interconnecting with Nature, this could be defined as:

- People as users and carers.
- Nature as providers and the nurtured.

So children interconnecting with a tree might:

- use the tree to play in the shade of its branches and care for it by giving it water when needed in a drought.
- and the tree provides the shade and is nurtured by the water to survive the drought.

What would people who are not just users of Nature, but also carers do? I think such people would

- **Notice** things
- **Observe** details
- **Share** what they know
- **Care** about what happens
- and **act** when something arises and they have the confidence to do so.

Fig 2 – This Grade 3 student noticed details in Nature, created with it and enthusiastically shared it

"I noticed that this gumnut is like the Olympic Cauldron and with these flower bits, like it lit."
J., Grade 3

Photo J. Clark 2012 used with permission of Yaapeet P. S.

Can we help develop people who really are interconnected with their natural environment (see Fig 2)? I think we can, because the ever-present 'screens' and the way people connect with them has similar features to this. They visit 'screens' repeatedly, notice details and changes, share what is happening, care when things change, and act to update - hoping to make things even better? As environmental educators we help children to these things with Nature instead of 'screens'. There are lots of activities through which this can be done. Some that were done at Yaapeet in 2011 follow.

Yaapeet

Yaapeet Primary School is one of the smallest schools in Victoria. It is set in a small rural community in Victoria's northwest, and in a yard blessed with a great variety of trees, next to a Mallee woodland and within walking distance of the local wetland. The staff care about the environment and challenging their children to become their best. In 2011, I provided an Environmental Science program that focused on trees for the International Year of Forests.

The activities encouraged the children to develop interconnectedness with trees, in their school yard especially, and in other local places. There were repeated visits around the school yard. Recordings were made that showed caring in its simplest form – taking notice and remembering. They also provided materials to share – another simple level of caring about Nature, by letting others know and value what is there. The feature with which the children interconnected most was the old Moonah tree (Fig 1), a favourite for play, and used for investigations and for inspiration for a story.

Part 2 Review of the YPS children in 2012 for next steps and courageous ones.

In August 2012, I returned to review the 2011 program from the point of view of this presentation – interconnectedness with Nature and next courageous steps for the children. I expected and did find that the children continued to notice things in Nature (Fig 3) and to have that sense of wonder about Nature (see Fig 2), that were based in activities we'd done, e.g. noticing size, shape, colour, homes and names of living things. I didn't expect to find courageous steps, but there had been.

Figure 3– Some 2012 statements from the children about how their behaviour has changed.

I know the bugs in our swimming pool are backswimmers now.

I know the dam is a home and **I try to disturb it less.**

I look for living things in the water now.

I used to think a leaf is a leaf. I now think about size and shape.

I don't shoo away the dragon flies anymore as I now understand what they are.

I notice and remember the names of trees. …
and of plants in the tubes when we went tree planting.

2012 Quotes from students used with permission from Yaapeet P.S.,
Photographs left of Turkey Ponds Wetlands, Yaapeet, and right of Clay Wattle labeled by children in school yard, Photographs by Jeanie Clark

I was delighted to find that the children had already made some changes to their behaviour to benefit the environment. From Figure 3, is **not** shooing off the dragon flies from the dam anymore and **not** disturbing the living things there, next courageous steps at lower primary school age? One can foresee that as adults, such children will have the courage and confidence to make changes to their behaviour that will benefit the environment, because they have already done so when young.

When does a next step become a next courageous step?

Figure 4 Some new skills developed during the 2011 Environmental Science Program

Photographs: on left Grade 1 girls with recordings by drawings; on right Middle years students learn to test water quality
Photos by J. Clark, 2011, used with permission from Yaapeet P.S..

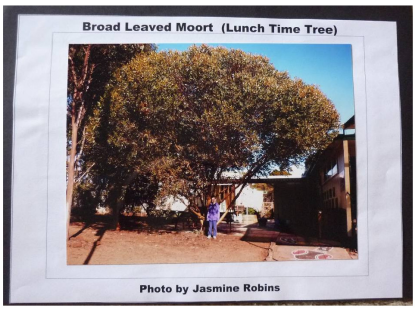
For the Year 1 girls, it was a bit hard and scary at the start to draw to record their Nature observations and show them (Fig 4 left). Learning to use the water testing equipment was a similar challenge for the Middle Years children (Fig 4 right). As teachers, we challenge our students repeatedly with skills and knowledge. They grow by it, but do we notice, what was a next courageous step for a child to come out of their comfort zone to do that new thing?

One action clearly was a next courageous step in 2012. It came from the upsetting removal of a favourite and shade-giving tree over the lunch area. One student put pen to paper (Fig 5), recording how the children felt about this loss. J, courageously, sent his statement to the local paper.

Figure 5 From the 2011 Lunch Tree to the 2012 Teepee

In term 2, a great tree that had shaded the Yaapeet Primary School lunch area for many years had to be cut down because of fire danger.
I was not happy at all when I heard it was going to be cut down.
The man that cut it down was a past student of the primary school, who may have even planted the tree himself.
The tree was a Round Leaf Moort.
Brad didn't want to cut it down, but some fire danger man came and thought the tree was fire risk to the building, so it had to be cut down.
Suddenly where the tree had been, there was a big space….
How are we going to fill the space?
We had a few ideas but settled on a teepee.

J., Grade 3 20/8/2012



Photos and quote used with permission of Yaapeet P. S., Photos by J. Clark

There was further action following this. The children went to the regional Biolink planting weekend, replacing 50 trees for the 1 they had lost. However this was not a 'next courageous step' for them as they had planted trees at other times. J's letter was different - putting his opinions into a public place, where they could be a challenge to authority and to perceived good fire safety.

Part 3 –the 2011 Environmental Science Program

The 2011 Environmental Science program provided next steps for the children that encouraged them to develop interconnectedness with trees, especially, and with living things related to them in their school yard and in other local places. Varying with the child there were experiences that were next courageous steps at their level, like the drawing and water testing (Fig 4) .

What were the elements of the 2011 Environmental Science program?

- repeated visits to the trees of the school yard.
    - to develop a sense of wonder at 'nature'
    - notice natural things happening and change the planned session when unexpected things did (fig 6)
    - get to know them better!
- Make recordings of observations
    - caring in its simplest form – taking notice and remembering.(Fig 7)
    - knowing at least one natural feature well and being aware of its processes and linkages to other things, through Science Talent Search.

    - source materials to share in UNEP and World Wetlands Day competitions
- communicate observations to others
- care about living things
- act where they can – including sharing information as a first step
- see themselves as a part of their natural world

The Yaapeet children created materials about their local environment that were shared at:

- the local level, for the
    - Personal Journals
    - Classroom posters
    - school newsletter (Yabba)
    - local paper (Rainbow Argus)
- the regional level, being part of the
    - Cluster Shared Stories Day
    - The regional 'pH, Salinity and the Trees' National Science and Water Weeks project
- the state level, entries for the
    - Science Talent Search competitions
- the national level, entries for the
    - Wetlands Australia Photographic Competition
- the global level, placing materials in
    - Perth Zoo's on-line Global Forests Photo Album
    - the school website about Yaapeet's trees (Science Talent Search projects)
    - UNEP's 20th International Children's Painting Competition and so TUNZA art display

When people take courageous steps, they usually want to share their information with others. What about children? Is putting their information out into local to global forums a courageous' step too for them? If so, is it likely to help them as adults to be comfortable with taking actions if they are needed? Given J.'s confidence in his letter about the lost tree, I think so.

My number one step – go outside, notice Nature as it happens, where it is

If developing a sense of wonder at Nature is my aim, then getting-to-know local Nature, by visiting it repeatedly to see changes occur is my key activity. Going outside into Nature is most powerful when Nature is in charge of us, i.e. when what is there drives the session content. As a teacher, dropping a prepared lesson for, say, a frog which turns up in the garden (Fig 6), can be a next courageous step! It also shows a sense of wonder at a creature which is worthy of such a change. Responding to Nature is a next courageous step if you are not used to doing this.

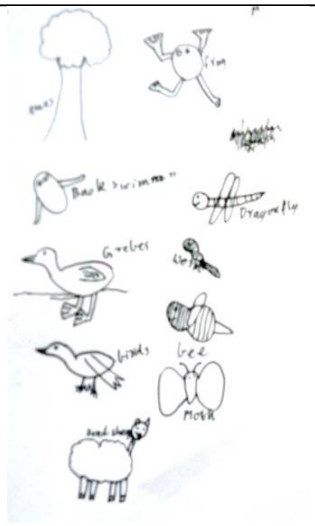
Figure 6 A Mallee Spadefoot visits school grounds –and the lifecycle diagram made from his visit.

Notice Nature's characteristics and record them.

Being outside in Nature may not develop a sense of wonder on its own, unless someone encourages us to notice and observe details, to record and share it. Use whatever sense is appropriate – sight, sound, smell, touch, taste. How best to record it? It will depend on what has initiated the sense of wonder and the skills of the person. For me, I especially like drawings and encouraging children to draw their observations, but there are lots of other techniques I use. However things are recorded, it is only part of the observation, the other part being - what are you doing this for? How are you going to share it? It is an aspect of caring about Nature to share it. As you share something that has taken you with a sense of wonder, you can expect to feel your own sense of wonder to grow.

Many observations were recorded in the children's Nature Journals, especially in drawings such as the living things at the dam (Fig 7). Mathematical concepts of shape and number are easily integrated into such drawings, when noticing number of legs, and shape of body for example. Recording with camera and video can also be used, and skills for these may also need to be taught.

Figure 7 –Drawings of life at the dam went with careful observation of it.



M – … about living things at our dam. I didn't realise that there were so many different water life living in our dam. Like; water mites, the small red dots swimming around.

Photo left, children recording their observations of plants in their journals,
centre, children examining water samples for aquatic macro-invertebrates ,
and right, some recordings of living things at the dam.
Photos used with permission of Yaapeet P. S. during the 2011 Life at the Dam field day from the school website photo gallery

Drawings as a skill is a next courageous step if you are not used to it, but look for the basic shapes and use labels.

These journal records are the key classroom resource for creating new materials and resources to communicate observations to others. They were used for the Science Talent Search projects (Fig 9), the UNEP drawing competition project (Fig 8), and the Perth Zoo IYF Global Forest Album project (Fig 10). They can also become the resource materials when looking for changes over time.

Contribute to Projects in the wider world

In today's schools, thanks to modern communications and technology, it is not at all difficult to reach outside the local area. From their backyard, students can share their place with neighbours, regions, the state, nation and the world. At Yaapeet, we participated in projects and competitions that took the school's environment out to many levels. At whatever level we participate, when we contribute our local Nature to a wider scale project, we are showing that it matters to us. Since we value it enough to do this, we implicitly encourage others to look for some sense of value in it too.

Global

United Nations Environment Program's (UNEP) 2011 20th International Children's Painting Competition.

Our first project was a global one – UNEP's 2011 International Childrens' Painting Competition, with its theme "forest: life in the forests (biodiversity)". From a delightful field day at a local dam, still with natural woodland around part of it, the children created drawings of a local wetland forest (Fig 8). These were entered proudly into this competition, since all entries are displayed at the TUNZA International Children and Youth Conference. (Tunza is Swahili word for "treat with care and affection"). In 2011, this was held in Indonesia, and we liked the idea that we were sharing a little bit of our part of the world with attendees there. This competition has amazing entries each year, which can also be used to see how the themes are interpreted from different parts of the world.

Figure 8 United Nations Environment Program's (UNEP) 20th International Children's Painting Competition. 'Forest: Life in the forests (biodiversity)'

Joels 'Life in the Forest' drawing had great detail like moss, fallen branches and spiders.

This drawing competition has some amazing entries on its website are useful for inspiring wonder in nature too.

Photo by Jeanie Clark, 2011, used with permission from Yaapeet P.S.

Perth Zoo International Year of Forests Global Forest Photo Album,

For the 2011 International Year of Forests, Perth Zoo created an inspiring website, the Global Forest Photo Album, for the world to share its local native trees and how they are valued. It was great to use for the differing values from around the world and for the incentive to show off our local trees.

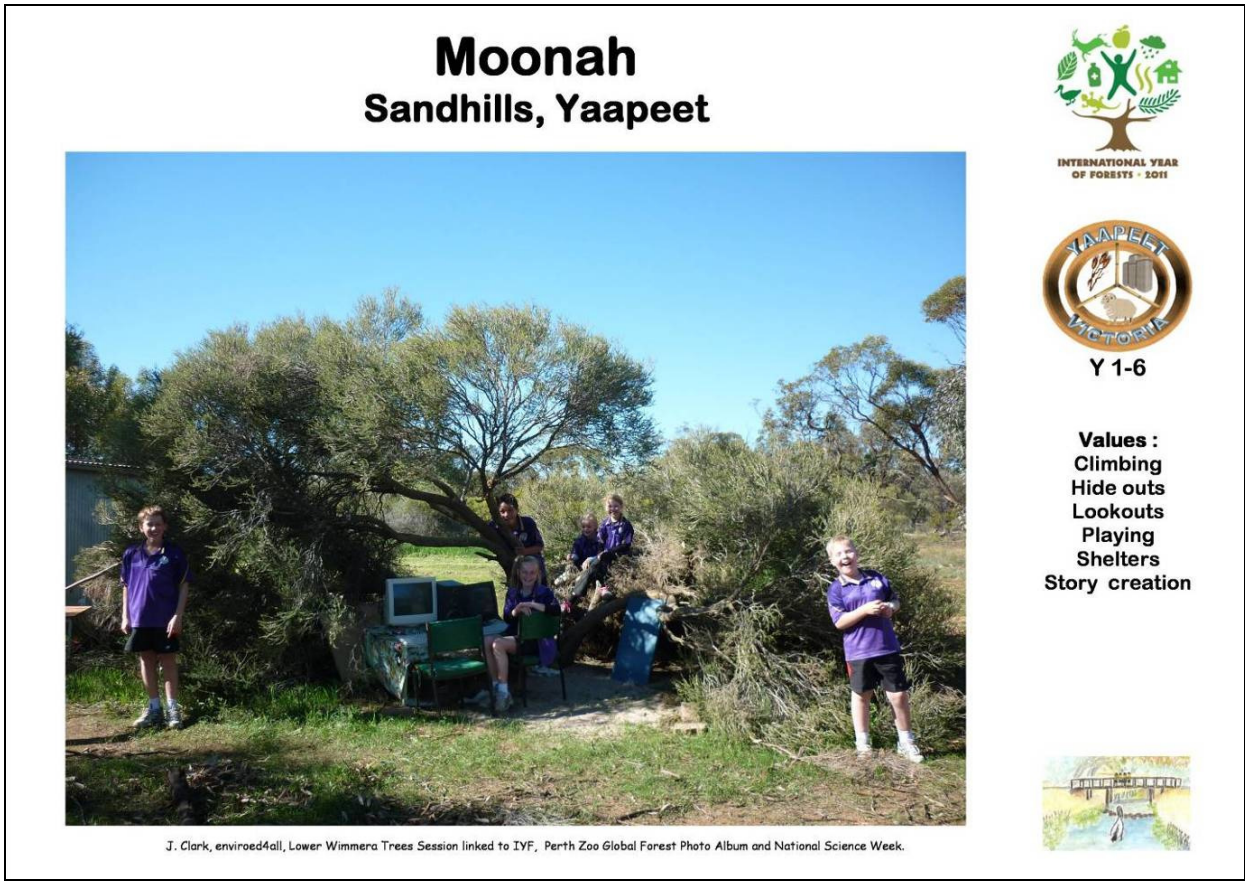
Despite the range of trees in the Yaapeet school yard, there was only one choice. It was the oldest tree and also the favourite for play – the Moonah. The children expressed their own values for it in their Nature journals, which were worked into one group statement of values:

> *"The Moonah Tree in Yaapeet Primary School's garden is fun to climb and has really good lookouts. You can lay sticks along its branches and make shelters. We hide, rest, and play in and under it. We created a story about it. Our Moonah (Melaleuca lanceolata, or Black Tea Tree) gives us pleasure!"*

This shows some of the interconnectedness of the children with their old Moonah tree (Figs 1, and 9). The children use their old Moonah tree in many ways, especially for play. They are also carers of it, for although they play in it, they would not let anything happen to damage it – but it is a tough

tree too! Nature, in the form of this tree, is the provider for the children of shade, the place for play and inspiration for stories. Nature is also nurtured - though needing little active care by the present generation, this hundred's of years old tree has survived to be part of the school yard.

Figure 9 Values of the Moonah



National

WetlandCare Australia National Photography Competition for Youth

The WetlandCare Photography Competition on the theme 'Wetlands, Tourism and Recreation' aims to prepare people for World Wetlands Day. This national photography competition also enabled the Yaapeet children to show their valuing of Nature, and sense of wonder at, and interconnectedness with, their local wetlands environment.

Figure 10– Sharing Yaapeet's Nature with Australia in a photography competition

Come to Turkey Bottom Ponds for their birds and you will hear their songs.
There is lots of algae in the water for little tadpoles for frog-watchers, like A.. on the right.
J.., on the left, is looking up some plants that live in the water before taking pictures of them.

From A... (Gr1)

Photographic skills for a stated purpose supported by an opinion can be a next courageous step for students.

Photographs and quotes by the Yaapeet children from their 2011 entries.
Permission to use from Yaapeet Primary School

Turkey Bottom Ponds lay within walking distance at the bottom of the hill from the school. We spent a day and a half at Yaapeet's wetlands observing and recording its life and gathering materials and ideas to promote their small wetland for tourism. Each child took their own set of (planned) photos and then from these, chose ones that would best invite tourism. They also each then developed a statement of the tourist potential to accompany it. Each child was able to discover something appropriate to share, right from the youngest (see Fig 10), which like this statement reveals a sense of wonder at something there.

State

Science Talent Search

There are many competitions which can be used for environmental education. The one that I like best is the annual Science Teachers Association of Victoria Science Talent Search (STS) competitions. They have a suite of genres that can be very valuable for getting to know Nature better and sharing it. They have creative elements and some appropriate rigour for reporting. However they are long-term projects and challenging for students to complete. For those who do complete them, both children and the teachers that support them, I would certainly say that they have taken a next courageous step. Children seem to 'get' the intrinsic value in doing a challenging project well, and if there are any awards, that is just icing on the cake.

STS project have many forms. I have found the Science Photography, Science Video and Creative Writing- Science Based Picture Story Books to be most worthwhile, each of which was done at Yaapeet. All topics used their skills of observation and noticing Nature. The projects involved a sharing of their observational materials. They drew on communication skills, both in the visual and in the Science Report that goes with each one. A reflection on reasons for the choice of topic is another part – and all said it was because the living things were interesting to them, i.e. they had found that sense of wonder about them. Fig 11 s shows a small visual from each of the projects:

- two Science Photography projects:
  - the grade 1 girls identified and described six favourite trees in the school yard
  - the grade 2 boy described the leaves of six trees from the school yard,
- one Science DVD
  - the grade 6 boys showed the different stages of a particular gum nut
- one Science- based Picture Story Book
  - the senior girls book Cody's Adventures was about Carbon's movements in a tree.

Except for the DVD, the full projects are on the Yaapeet Primary School website.

Figure 11 Examples of pages from 'Six Leaves', 'Six Trees', 'Gumnuts' and 'Cody'- STS projects.

Photos of pages from 2011 Yaapeet Primary School Science Talent Search projects used with permission from Yaapeet Primary School.

Regional

pH, salinity and the trees

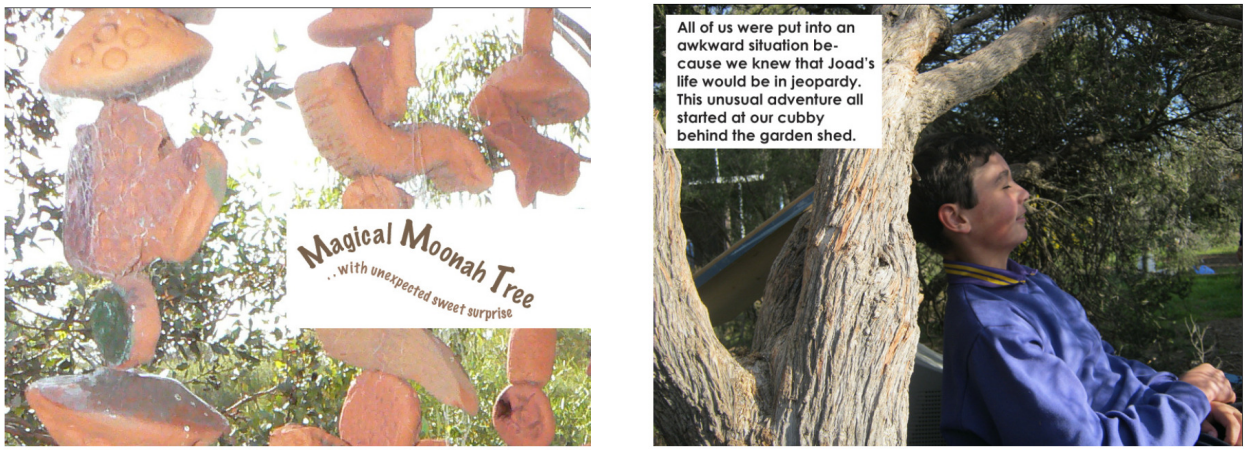
Yaapeet was part of the regional project "*pH, salinity and the trees*" which linked schools and some groups of the Northern Wimmera for a combined International Year of Forests and of Chemistry project. Each group had a special water place, for which they had a photo and value statement for the Perth Zoo project (like Fig 9) and water quality test results. They were shared with each other to discover regional similarities and differences and presented as a group display at six local shows. One of these came from the regional indigenous group, so there was also a cultural comparison.

Would it be a next courageous step for your students to share their values about Nature regionally or globally? Would it be a different for teacher from students?

Cluster story telling day.

Yaapeet is part of a cluster of neighbouring small schools which meet regularly. In 2011, one of their meeting days was dedicated to sharing stories which each school had created for this meeting. The interconnectedness of the Yaapeet children was obvious in the way their story was set at the start in the cubby of their favourite tree- the Moonah (shown in Figs 1 and 9) – and much of the action took place around it (Fig 12).

Figure 12 Interconnectedness shown in the Moonah setting for the children's story



Photos from the '*Magical Moonah Tree ... with unexpected sweet surprise*" by Yaapeet Primary School 2011 left – cover, right second page. Used with permission of Yaapeet Primary School

Local Community

There are lots of things that can be done within a school community, thanks to community newsletters, local papers, school websites .... And the most important of all, children going home to share with their family and friends what has amazed them in Nature. At Yaapeet, all were used.

From the year, this is the one that excited me the most, and leaves me with a sense of wonder. To investigate the little life using the Moonah, we dug holes and made traps and recorded what fell in. It wasn't a lot, and not as much as I had anticipated. Then we started building a food web from the things that we knew lived around and in the Moonah. Yaapeet P. S. was soon to go on a visit to Tasmania, and knowing that Tasmanian Devil's had lived on the mainland at one time, I posed the question 'Could a Tasmanian Devil had lived here?" To our great surprise, the Devil's food needs and the Moonah's food web showed that it could have (Fig 13)! Given that Yaapeet P.S.'s Moonah was centuries old, it could indeed have had Tasmanian Devil's feeding beneath it in times gone by!

Figure 13 Discovering if a Tasmanian Devil could have lived around the Moonah.

Photos from left: setting traps for Life under the Moonah, record page and Food Web page, used with permission from Yaapeet Primary School.

Part 4 Conclusion

How interconnected are the Yaapeet students with Nature? Very! Interconnectedness is a two-way process. At this school, they were able to give to and receive from trees and wetlands, locally.

How can we tell? Their interest is long-lasting. In 2012, the children reported what they still notice now that they did not before the 2011 Environmental Science program. They care about the living things they have been able to get to know better. They have actions that support this.

When I reflect on M's "*I **now*** [my emphasis] *draw detailed pictures of trees,*' it reminds me that each step is so individual, interconnectedness with Nature will be shown in different ways and through varying skills, and what may be courageous to one may not be to another.

What do they care most about? The Moonah – "*We are passionate about that tree. It's not just any old Moonah – it's awesome. The branches became huts. The Tassie Devil could have lived here*!"

The children at Yaapeet P.S. are interconnected with their local natural environment, but they have not done it on their own. They are surrounded by teachers and families that have valued their natural environment over many years. The 2011 YPS Environmental Science program was evidence of the values that the YPS community holds on Nature, and belies a whole school attitude that interconnects the school community with its local natural environment. This school community is already taking the 'next courageous steps' to creating people who will care about 'living in harmony with Nature'. They are inspiring to work with!

Reflections

What are you reflecting on? Maybe:

- your next step, your next courageous step?
- how you can enable children to be able to take next steps, next courageous steps towards environmental actions, sustainable futures, living in harmony with Nature?

Whatever it is, let me suggest the **following reflections** first:

- your **attitudes** and **behaviours** for interconnecting with the environment - especially getting out to really know well Nature that is present locally.
- Is there value in creating a next step for (young) children to **wonder** at Nature? If so, how can you do it?
- Are there competitions or projects that you could involve children in to share their information and take a next step further '**out there**'? (Be courageous!)
- What **inspires** you in Nature in your local environment?

Thankyou for sharing this, my next courageous step, with you.

References and further reading

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Most of the 2011 Yaapeet P.S. children in this resilient Moonah. Photo J. Clark used with permission of Yaapeet P. S.