

Forget your botany

Developing children's sensibility to nature through arts-based environmental education

Many people deplore the loss of direct contact with nature. Moreover, this absence might be one of the root causes for the ecological crisis we are experiencing today, and for the mood of indifference that many people feel for it. It is hard to care for something that we no longer perceive as being constitutive to what makes us human. To counter this development, an increasing group of educators thinks that education should facilitate a form of learning that enhances children's sensibility to nature and place, to what Gregory Bateson so aptly described as 'the pattern which connects'.

One effort in this direction has been the advance of what is called 'environmental education'. It is one of the challenges for environmental education to get children enthusiastic beyond the limited perspective that the natural sciences offer. On top of that it runs the risk of unintentionally conveying an ethics of 'guilt'. A one-sided focus on the scope and magnitude of today's environmental crises can cause feelings of personal inadequacy and even despair. The result can paradoxically be an even further detachment from nature, and a mindset that considers the act of reflection on the relation between humans and nature as first and foremost a limiting endeavour, rather than something that can enrich one's life. If an ecological lifestyle is seen only as restriction and austerity, it will only be accepted as a last resort.

Beautiful actions

This is one of the underlying reasons that the Norwegian eco-philosopher Arne Naess called attention to an interesting element in the writings of

Immanuel Kant. Kant makes a distinction between what he calls a 'beautiful act' and a 'moral act'. An act is moral if it is in accordance with your ethical duty: you have an obligation to do something. More often than not, this may go against your inclinations, against that what you want to do. For Kant, a beautiful act is an act where we act with our inclinations, so that it is what we want to do. Naess believes that through spiritual or psychological development we can learn to identify with other humans, with animals and plants and even ecosystems. We can learn to see ourselves in these other creatures, and in that way they become part of our being. By identifying with the more-than-human world, we want to protect it; we are not acting against our inclinations.

The desire to act beautifully is something that can be learned at an early age. According to Naess, we might have to relearn the way children appreciate the things around them: *"Children are more spontaneous in the sense that reflection and conventional views of things do not yet play such enormous role. If we could be able to see a little bit more like children, we would gain very much. That's a very difficult re-development, to get into this state of children's inner life."*

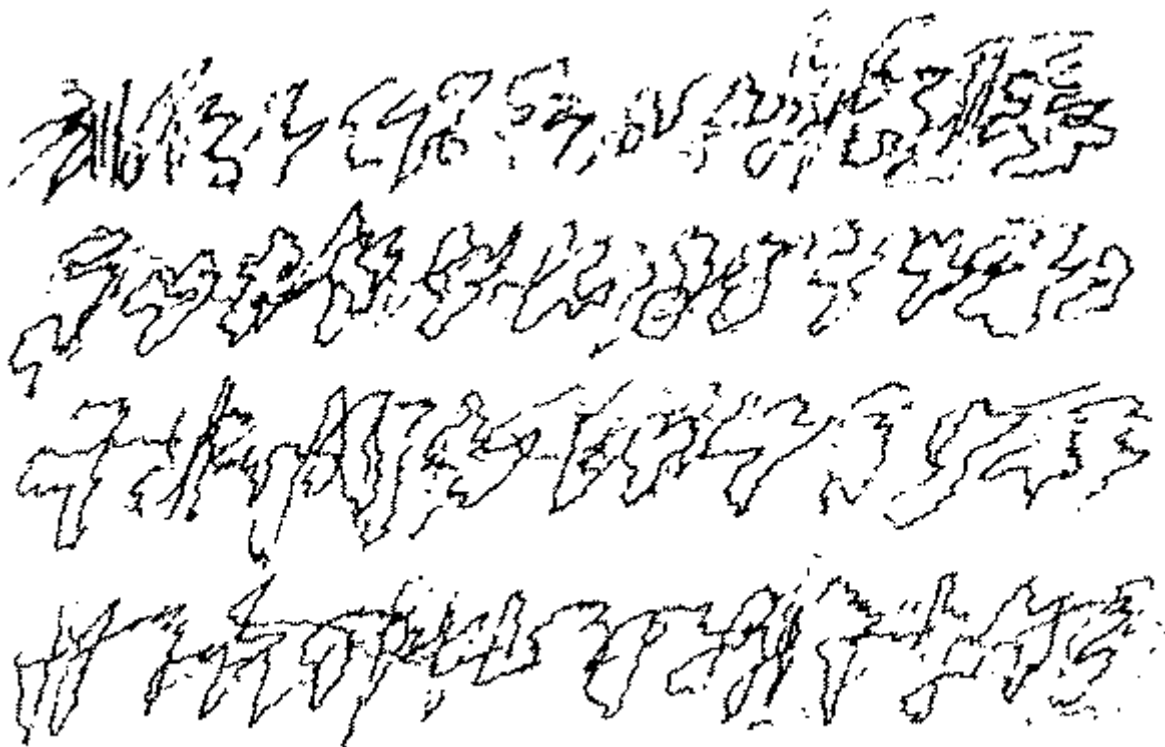
Nearly a quarter century ago, Edith Cobb argued in *The Ecology of Imagination in Childhood* that children have a certain age period at which they are more predisposed to be open for the natural world: *"There is a special period, the little-understood, prepuberal, halcyon, middle age of childhood, approximately from five or six to eleven or twelve ... when the natural world is experienced in some highly evocative way, producing in the child a*

sense of some profound continuity, a renewal of relationship with nature as process ... [This original childhood experience may be] extended through memory into a lifelong renewal of the early power to learn and to evolve."

Since Cobb wrote these words, however, the environment for children has more and more become an environment permeated by technology. For many children in Western society, the prevailing childhood experience is that of being engaged in watching TV and playing computer and video games. TV and electronic games present to a child a world of constantly changing pictures. A child is brought into a reality where there is a direct and observable cause-effect relationship between all of his or her actions and the images on the screen. Culture critic Jerry Mander describes the consequences as follows: "When that whirling-spinning-exploding world is turned off, he or she is left in real life, the room, the house, a much slower world. Boring by comparison. If he or she then goes outside into nature - well, nature is really slow. It

barely moves at all. It takes an extreme degree of calm to perceive things in nature, and I suspect we may be producing a generation of people too sped-up to attune themselves to slower natural rhythms. Children of the computer generation grow up with their nervous systems attuned to televisions, video games, and computers. Like the techno-centred adult, they are out of touch with the speed of natural life, and are easily annoyed and bored by what they perceive as human slowness and inefficiency."

So when we try to establish a bond between children and nature, we seem to be stuck with two major problems. One: the circumstance that conventional environmental education runs the risk of leading to despair and indifference, and two, the fact that many children have lost interest in nature because it is less exciting than the world of electronic illusions. We badly seem in need of innovative ways to awaken and nourish the supposed innate sensibility of children to the natural world.



Think of the top of blade of a grass as a fountain pen. When the wind blows through the grass, it writes with the top of the grass blade a quiet poem. Could it look like this? Picture: Magnus Lönn

Arts-based environmental education

It is here that exciting developments in the Nordic European countries can be of inspiration. Art is the key here. In the beginning of the 1990's, a group of art educators in Finland, aware of the worsening ecological crisis in the society around them, began to look if art could come to help in the development of a more profound form of environmental education. According to Meri-Helga Mantere, who first coined the term "arts-based environmental education" in 1992, it is a method that "supports fresh perception, the nearby, personal enjoyment and pleasure (and sometimes agony as well) of perceiving the world from the heart." It aims at "an openness to sensitivity, new and personal ways to articulate and share one's environmental experiences, which might be beautiful but also disgusting, peaceful but also threatening." In short, aesthetic environmental education is grounded on the belief that sensitivity to the environment can be developed by artistic activities. Motivation to act for the good of the environment is based above all on positive and valued experiences which are often of an aesthetic nature. In the view of Mantere, these experiences can be generated by open and immediate contact with nature and the often new and fresh view of such phenomena that art provides. Arts subjects can develop a positive image for a way of life that conserves nature. This requires a great deal of inventiveness, joy and dignity. To Meri-Helga the connections are obvious: "The early experiences of nature in childhood, the ability as an adult to enjoy these experiences, comprehending the value of the richness and diversity of nature, and the need and energy to act on behalf of nature and a better environment are all interdependent."

One way of defining art is that it can offer a person - both as a "producer" and as a "consumer" of art - unique, often non-cognitive ways of interpreting and signifying experiences in the world. Art can feed and guide our sensibility for reality and life. Art activities have a tendency (or at least potential) to reach, in different degrees of intensity, the sensory, perceptual, emotional, cognitive, symbolic and

creative levels of human beings. They can sharpen and refine our perception and make us sensitive for the mystery of the things around us. Through that we may experience the world, nature and people in such a way as if we see them for the first time. In the context of learning about nature, art thus has a potential that conventional approaches lack.

Henri David Thoreau in the mid-nineteenth century wrote in his Journals that he was continuously struggling to meet nature in its elementary directness, unmediated by conventions, categories, concepts, and scientific knowledge. *"It is only when we forget all our learning,"* Thoreau wrote, *"that we begin to know. I do not get nearer by a hair's breadth to any natural object so long as I presume that I have an introduction to it from some learned man. To conceive of it with a total apprehension I must for the thousandth time approach it as something totally strange. If you would make acquaintance with the ferns you must forget your botany. You must get rid of what is commonly called knowledge of them. Not a single scientific term or distinction is the least to the purpose, for you would faint perceive something, and you must approach the object totally unprejudiced. You must be aware that no thing is what you have taken it to be."*

In its essence, ecological perception is about perceiving the dynamic relationships between distinctions such as the self and the other, and spirit and matter. By orienting one's personal artistic responses to the sensuous natural environment, one has an opening to embrace our living connection to the world. Through art we can see and approach the outside world afresh.

Art also has a capacity "to stop us in our tracks". An important function of art is estrangement or defamiliarization. It helps us to review and renew our understandings of everyday things and events which are so familiar to us that our perception of them has become routine. Furthermore, art can open us up to the presence of ambiguity. In all these meanings (and many more can be given), art has the potential to offer new ways of coming to terms with living and surviving in the technosphere.

Dealing with pessimism

Some educators argue that a clear distinction between different age groups of children should be made when engaging in environmental education. The assumption being that teachers can only take up the subject of the ecological crisis with children of a certain age. According to this view, education should begin with stressing the positive aspects of nature, rather than the disempowering news of ecological decline. As a teacher of horticulture and biology with many years of experience, Linda Jolly has had ample opportunity to learn from the pupils themselves what they associate with the word 'ecology'. To them, she says, ecology means information about environmental problems, e.g. the pollution of air and water, etc.: *"There is certainly no lack of awareness of this kind of 'ecology' among the pupils and one could easily be tempted to contribute even more to this type of information and awareness in the school context. Yet the multitude of catastrophic news items pouring out over our children today is apt to engender discouragement and pessimism - a fact acknowledged by many educators today. Young people long for real experiences of nature and what they want to feel is that they can do something towards saving nature. So the question must be: What can schools do to enable children to experience positive ecological actions of humanity in nature as a counterweight to all the disaster reports? How can we help the children to experience nature at a deeper level and attain a better understanding of the relationships between all living beings?"*

There is a considerable difference between living in an environment without being conscious of it, and, in contrast, having one's roots in a biological and cultural area and also having an idea of where one comes from, where one is at present, and where one may be going. In a similar vein, according to Meri-Helga Mantere, there is a great difference between seeing the future as only an ominous and vaguely defined threat or void, and seeing it as something one can outline, imagine and influence.

She believes that educators have not paid enough attention to the pessimistic idea of the future that is common among many young people, and to the understanding of life that follows from it. Rather than ignoring or suppressing them, she suggests that these fears and feelings of pessimism and hopelessness should be discussed with adults in a spirit of sufficient confidentiality. In that way, previously unexpressed mental images and sources of anxiety would lose at least some of their debilitating power. One of the main meanings of art through the ages has indeed been its ability to reach the deeper levels of the psyche and to act as a channel and possibility for giving shape to feelings that are often unconscious. This means, says Mantere, that also the 'dark' side of the mind can be integrated into the totality of the psyche, and thus be made relative. If an art teacher is willing to give the pupils and students art exercises in which they can break down their possible fears, life-negating visions and hopelessness in a sufficiently secure context, he or she can act therapeutically: "It is a therapeutic practice to receive these pictures with respect for the students' views and their world of mental images, while at the same time trying to pass on a positive attitude towards life and hope for the future."

Seeing

Judith Belzer is an environmental artist who strongly believes in the importance of learning new ways to approach the world around us: *"If you can learn to immerse yourself in the ordinary things that are very close by, you start to understand what it means to exist in nature. By establishing a relationship with nature based on particulars - the way leaves move in space, say, or attach to a branch - you begin to break our habit of generalizing about nature from a distance. This is the first step towards changing our approach to the land and that starts with seeing."*

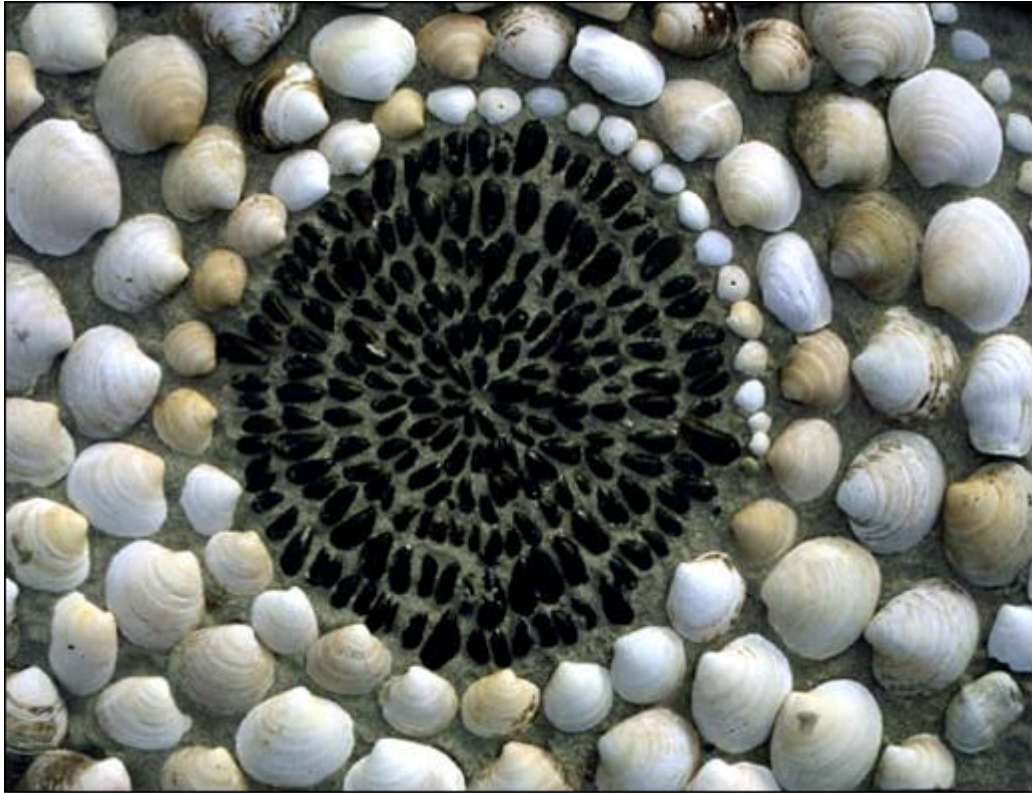


Photo: Timo Jokela

In arts-based environmental education, much emphasis is given to clarifying the 'seeing process' and developing skills to express this enhanced vision. Artistic-aesthetic learning, according to Finnish environmental artist Timo Jokela, involves observation, experience and increasing awareness in a holistic way. *"Observation is a core issue in interpreting and evaluating the environment. ...Our observations are based on the sum of our previous experiences and our expectations of the future."* Jokela argues that many of the phenomena that are brought to our consciousness through art can be understood as the sharpening of schemes of observation and activity: *"The romantic artist climbed a mountain and created an aerial perspective model of observation, teaching us to see the beauty of the dim shades of blue in the distance. The impressionists led us to observe the colour of light determined by weather, and the beauty in the changes of natural phenomena. Art creates new ways of observing, and examining art can act as a model for seeing one's own everyday surroundings in a new way, enriching one's knowledge, experience and understanding. Observational*

schemes can also stiffen and become confining conventions. In this case there is great educational significance in enriching them. Re-examined aesthetic models lead to new models to observe, classify, understand and construct one's own relationship with the environment."

Environmental art is art that is defined by a place: the form, material and even the birth process of the work takes the location into account. Jokela remarks: "The surrounding space itself may act as an artistic element. This requires that the birth process begins with a close orientation to the location: sitting, watching, smelling, walking – in other words a holistic exploration of the place." Usually the process also includes orienting to the history of a place, the stories it tells, and the meanings given to it by its users.

Many works of environmental art can be seen as environmental processes which aim to change environmental attitudes on an individual or community level. Jokela gives the example of European environmental art of artists like Andy Goldsworthy or Richard Long, whose connection to nature is respectful, almost sacral: "It is as if the

work refers to nature's own beauty or significance. The work of art opens one's eyes to see something ordinary and everyday in a new way. This way of work refines one's perceptions and makes one more sensitive to the environment. Here the borderlines between art and philosophy are disappearing, environmental art and environmental philosophy merge together."



Bird feeder hat. Photo Gina Morris

Another example is the work of American eco-artist Erica Fielder, who wants to encourage deeply personal relationships with the wild. *"Science and technology have given us all the tools and know-how we need to halt environmental destruction today", she says. "But what's missing is a feeling of kinship and empathy that motivates us to include the health of our watershed in our everyday decisions."*

Art exercises in nature

Timo Jokela has a clear view on how environmental art can be applied as a method of environmental education. According to Jokela, forms of environmental art are remarkably suitable to fieldwork and research practised in the environment by learners of all ages. Based on didactic planning models that have been developed in art education, exercises are developed in which the pupil's phase of development and previous knowledge of the subject are taken into consideration. In the process, the art world and the learner's world are combined into a project in which experiencing, searching for information, and structuring all merge together. All of them aim to increase one's sensitivity towards the

environment. Jokela distinguishes four categories of exercises that can be adapted as methods of arts-based environmental education:

- exercises focusing one's observations;
- exercises which bring forward the processes happening in nature and help us to perceive them more sensitively: growth and decay, the flow of water, the turning of day and night, the changes of light, the wind, etc.;
- exercises which aim to alter set ways of viewing the environment, and finally:
- exercises which test the scale of the environment and human 'limits'.

In the exercises, the 'chaos' of the environment can be organised according to certain chosen variables. The choice can be based on visual observations such as colour, form, size, or on tactile sensations such as soft or hard. Other choices could be based on cognitive concepts such as living, lifeless, belonging to nature, left behind by a human. An exercise could start by making observations and could continue with methods of comparison, classification and organisation. To Jokela, especially well-suited starting points are archetypal symbols such as a circle, square, triangle, point, line, cross or spiral.

When the exercise is more process-focused, it could involve paths of movement and rituals in which the participant or viewer takes part. Such exercises lead to works that create a moment of change; movement and time create new spaces and environments. One assignment to a group may be that they have to go outside and select a tree. Two members of the group then mention eight adjectives about the tree. After that, two other members write a poem together using those adjectives. Then the pupils come back and read the poem to the whole group. Another exercise might be that the group goes outside and each pupil picks up an object from nature without harming it. This could be a stone, a piece of dry wood, etc. They select the pieces according to how the object is felt to resemble

themselves. After finding those objects, they come back and each tells in front of the group why they selected just that object.

When the goal of the exercises is to change the way in which one is common to see the environment, an exercise could be as follows: roughly sketch a line or circle on a map. Walk the distance of the line in nature. Stop every hundred metres and document and gather samples. Afterwards, analyse the differences between the experiences you gain this way and the preconceived impressions you had. Exercises that aim to test the human limits vis-à-vis the scale of the environment often have a communal, cooperative nature. The starting point is a large amount of material and the aim is to bring about a clear change in the environment. Suitable places are places where nature brings the material back into its cycle such as a beaches. An example could be an exercise where the task is to arrange the flotsam on a shore in a mathematical order. Three concrete examples of promising and ongoing practices of arts-based environmental education in the Nordic countries are given below: one from Norway, one from Finland, and the last one from Sweden.

Arts-inspired botanical excursion

Each summer, when the flowering period is at its peak, teacher Linda Jolly takes a group of children with a boat to the island Fjelberg, a little way off the west coast of the Norway harbour town Bergen. They embark on a botanical excursion in which they are to work with nature experiences artistically and to cultivate the perceptive faculties of the senses in a systematic manner. Along come watercolour paper and sketchbooks as well as plant identification books and magnifying glasses. The aim is that the children not just become familiar with individual plants but also with an ancient landscape developed

and cultivated by man, some of which is still preserved.

On arrival at the old vicarage the group starts with painting exercises on the theme of the meeting of light and dark (yellow and blue) on a sheet of paper. On the basis of the imaginary landscape that now arises on the painted sheets of paper, the children go out into the open and paint a picture of what they see. For example how the light of the skies meets upon the heaviness of the earth, producing many shades of green on the horizon. A further step could be accomplished by practising with tones of green alone. How many nuances of green can be created in such a composition of colour? How much red is there in the green of nature? How far does green extend towards blue, red and yellow without losing its green? Afterwards the children take their sheet of paper outside and paint the nuances of colour observable at the transition between woodland and meadow or between the many different types of plant that make up a hedge. In all these places they might experience "seeing green for the first time".

All of a sudden, even the monotonous green of a commercial pine forest may speak a different language from the richly varied green of the neighbouring forest of leafed trees. Linda explains: *"A blossom might stand out from the veritable sea of shades of green formed by the rounded roof of a deciduous wood. It will strike the observer as a foreign element, as something of a revelation. We came closer to that kind of experience through a painting exercise where certain areas were left blank in a 'sea' of green. Applying clear colours to these blank bits brought to light the blossoms in a flowery meadow or a rhododendron hedge or even a rose bush! After all, the blossom was so different from the rest of the plant that its connection to it was not taken for granted. It was Goethe who first recognised that the entire plant is formed out of the elements of stem and leaf. He saw that the calyx*



photo: Linda Jolly

and petals represented metamorphosed forms of the leaf element. In the case of yellow and blue blossoms this can be understood without undue difficulty through colour exercises.

In the case of red, it is helpful to occasionally examine individual petals or single reddish tinted leaves of the remaining plant. And whoever tries to capture plants in painting will invariably find, whilst mixing his green from the basic colours, that every plant green has an admixture of red besides yellow and blue in it. In other words, the red blossom is already contained in the green of the rest of the plant in a hidden form."

With this new experience in mind, the group goes out again to capture impressions in paint - for instance of a natural meadow in the midst of mountainous terrain or of a strip of vegetation along a path. This can then be compared to an artificially fertilised piece of grassland.

At another time the group goes out into an oak wood with dark paper and white pastels. The gnarled

trunk of the oak tree and its branches, contrasted with the lighter leafy sections, or with the sky above, could then become an ideal motif for reflecting the form and character of the oak. Hatching the light areas of the motif gave prominence to the peculiar, heavy dark form of the oak. In other places the light trunks and leaves of birch trees would be shining out against the darker background of the oaks. In this case the children work with the motif by hatching the dark background and leaving blanks for the white slender stems and the tender veil of leaves.

Linda Jolly: *"Such exercises are an opportunity to work with the relationships between the different elements of a landscape, with the relationship between colours, between light and dark. This gave a sense of something as a whole, as opposed to being fixated on an isolated object. Thus this method is appropriate to the ecological way of looking we desire to attain. In the exercise with oak and birch a familiar form engendered a new*

discovery through the work with the spaces in-between. After an exercise of this kind the pupils have a wholly new basis for understanding the essential being of different plants."



Linda Jolly

After a few days of working systematically, the pupils usually feel more free to find their own motifs in the surrounding landscape. What Linda considers is important on such occasions is that children learn to perceive with the eyes and colour sense of others. For this reason they pin up their paintings every day and look at them together.

The pupils are also expected to notice details and become familiar with individual plant species. Every pupil is supposed to draw up to twelve different plants. This also involves detailed drawings of different leaf shapes as well as sketches of petal configurations.

A leaf metamorphosis is a subject of separate study. The leaf shapes emerge best when painted black on white paper, says Linda. The spectrum of variation resulting from each pupil's series of leaves provides a good basis for discussing common themes such as relationships between the plants. Through drawing, the children find a common expression of the

characteristics of related plants. Jolly: *"This is preferable to concentrating on outer features which are often misleading. The pupils discover that rhythm, balance and harmony inherent in the world of plants can speak as evocatively as poetry. Auguste Rodin expressed it like this: 'It is the artist who is truly familiar with Nature. The blossom engages him in a dialogue through the graceful curve of its stems and the harmonious play of its colours. Each blossom has an inner word bestowed upon it by Nature.'"*

Linda reports that many pupils at first display a certain amount of anxiety and scepticism when faced with the task of practising a natural discipline in this manner. But the joy of discovery, as well as the feedback provided by artistic activity, invariably resulted in a positive working mood. The workday is frequently a lot longer here than an ordinary school day, but the pupils take this for granted. On returning to school the children arrange all their work in an exhibition which enables the younger pupils to share in what the older ones have been engaged in.



A party in the forest. Photo: <http://arted.uiah.fi/inseal/forest>

Finnish forest in art education

The Vantaa Art School is a private, extra-curricular school in southern Finland, which provides art education for children aged 5 to 20. Here, a few years ago, a special arts-based environmental

visited forests and produced works of art through perception, sensual impressions and experiences. The works were also influenced by the Finnish folk heritage, myths and legends. Excursions to exhibitions and museums were used to widen and deepen the knowledge of the relation of art and nature throughout art history. The forest-project also included happenings in shopping centres and at market places. Here, the students could cooperate with professional performance artists.



How would a bear feel? Photo: <http://arted.uiah.fi/insea/forest>

In late summer and early autumn, the classes visited the forests near to the school and made sketches and took photographs on the locations where the sketches were made. They also collected lots of loose nature materials to be taken into the classrooms for further studies and as working materials: dry

education project was carried out. The aim of this project, Finnish Forest – “Silva” in Art Education, was to enrich the students’ creativity and widen the aesthetic visions and cognition of the Finnish forest through art education. During the project the students

branches, leaves, pine needles, moss, lichens and even whole trees, which they surveyed and drew in the classes afterwards. The children read stories and fairy tales, discussed about the myths of animals and beasts still living in the Finnish forests and made pictures describing the animals and events. They also visited the forest in winter, in March, when there was enough light in the afternoons, and made landscape paintings in the open air. Afterwards the art works that the children made were shown at the Myyrmäki exhibition hall in Vantaa.

Utterances in the language of branches

A third Nordic example of an arts-based environmental education project can be found in Sweden, in an exhibition called *Palaver på grensiska*, which can freely be translated as “Utterances in the language of branches.” This exhibition about “language in nature, and nature in language” of artists Magnus Lönn and Björn Ed has been touring around through Sweden for several years. Each time, school classes in the visited community are invited to come and visit. Lönn and Ed have searched for ways in which images in nature remind us of language.

Which pictorial language does nature have? Are there any messages in all the fantastic forms, colours and sculptures that nature presents to us? What happens when one tries to see nature as it really is? Can we translate nature’s messages into our own language?

When Lönn and Ed reflected on these questions, they were inspired by the “natural history” of the letters of the alphabet. Take the letter “A” for example: upside down it has some resemblance to the head of an ox.



Peeled banana. Photo: Magnus Lönn

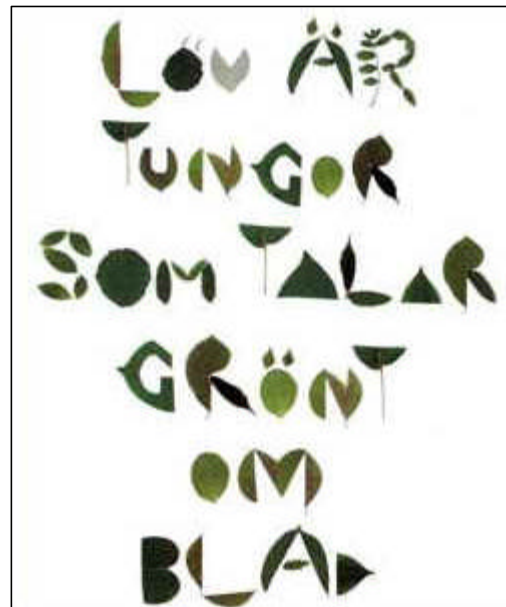
The exhibition aims to ignite the fantasy of children; its pedagogical set-up offers a means to enter a metaphorical border zone between nature and humans. Children can partake in workshops and be challenged to create their own language and alphabets. The basic idea is to engage children in the joy of translating.

Artist Magnus Lönn works in the border zone between images and words. When out and walking, he picks up whatever he finds. This could be a young bird hit by a car, or it can be banana peelings, which he dries to make up his own “peel alphabet”. Before the exhibition opens in a new town, Lönn invites the schoolteachers so that they can acquaint themselves with its contents and purpose. He suggests ideas for different uses one can have of “findings” in nature. The Swedish artist and curator believes that children should be encouraged to trust their own capacity to express themselves and to not be afraid of language. Instead it will be worthwhile to them, he believes, to try to stretch the taken-for-granted boundaries of language. For if one looks carefully, the whole world is filled with signs.

The exhibition is developed in such a way that it becomes a means to enter a metaphorical border

zone between nature and humans, ‘there where experiences of wonder and surprise seem to ask for a formulation in language’. Magnus Lönn explains: *“This exhibition came into being from our desire to investigate what nature possibly has to say to us. Filled as it is by sounds, leaves, tracks, butts and so on, it is easy for us to envisage that it has something to tell to us, as human beings. We are all part of her and constantly in need of being reminded that we belong to all that grows. ... What often happens when we look at nature is that we ‘project’ our own feelings on it. We see the autumn as ‘murky’ for example. But autumn really is neither grim nor gleeful. It is only we human beings who have a language in which we read it like that. Through play, which can involve a strong identification with a tree or with a grass-covered hill, or through something that is part of this exhibition, we can translate nature’s messages into our own mother tongue.”*

In the often very humorous exhibition, questions are asked like: What does the bark of a tree talk about; what does “Barkish” sound like? What do trees tell



‘Leaves are tongues that speak green about leaves.’

Photo: Magnus Lönn / Björn Ed

us? One of the aims of the exhibition is to inspire children to fantasise and to translate what is written

down when something is for example written in Barkish. Here, needles and branches also have their own language: "Needlish" and "Branchish". Björn Ed and Magnus Lönn try to establish communication processes through use of nature's own materials, using natural forms such as pine needles, branches, leaves and roots. It leads to such diverse results as a poem in needle language, an ant's cubical imagery, the movement of a worm spelling out curly structures on top of a piece of

paper, and the croaking conversation of two frogs translated into mimicking forms. *Palaver på grenesiska* offers a liberating upside-down perspective, a sense of moving out of the 'language cage' of humans.

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