

## INTERVIEW BY WE MAKE MONEY NOT ART

RÉGINE DEBATTY I am interested in the way you try to engage the public into your research about *Azolla*. You have already exhibited this project in several art spaces. How does the *Azolla* project take shape? Do you change strategy each time you exhibit it? Cooking at Färgfabriken for example and doing something else in Riga?

ERIK SJÖDIN What I end up doing is shaped a lot by circumstances. At Färgfabriken in Stockholm I exhibited in the summer and they had a courtyard so it was possible to grow *Azolla* outside. RIXC's exhibition at KIM? Contemporary Art Center in Riga was too early in the spring for it to be possible to grow *Azolla* outside, and the room I exhibited in didn't have any windows so I had to grow the *Azolla* under artificial lights. I also try to find people to collaborate with around the exhibitions. At Färgfabriken I got the chef at Färgfabriken's café to experiment with *Azolla* cooking with me.



*Azolla* cultivation at Rogaland Kunstcenter in Stavanger, Norway

I exhibit “The Azolla Cooking and Cultivation Project” as a work in progress because I think that an ongoing process can be more interesting and engaging than the conclusion. The project has always been more about the process than the result, but it is not that I don’t care about the result. I am hoping to arrive at something, but the result is the outcome of the process and in that sense the process is everything. Finding new ways of working, or living if you want, is very much what the project is about for me.

RD You are going to exhibit “The Azolla Cooking and Cultivation Project” again in end of May / June at Rogaland Kunstsenter in Stavanger. What will the work look like in Stavanger? Will you be cooking, growing *Azolla*?

ES I will make an installation inside the gallery where I will grow *Azolla*. There will also be a reading corner where a draft of the *Azolla* cookbook and cultivation manual that I am working on will be available along with some literature that relates to the project. Two texts that I will include are *Tomorrow is Our Permanent Address* by John Todd from New Alchemy Institute and the sociologist and philosopher Bruno Latour’s text *An attempt at a “Compositionist Manifesto”*. New Alchemy Institute was a research center that did pioneering research into agriculture, aquaculture and architecture in the 70’s and 80’s. In 1976 they experimented with *Azolla* as a mulch for lettuce. The results of these experiments were published in the 1977 issue of their journal, the same issue in which *Tomorrow is Our Permanent Address* was published. Already in the 70’s New Alchemy Institute were doing and thinking about much of what is being talked about as novelties today. In *Tomorrow is Our Permanent Address*, John Todd talks about exploring a “new synthesis”; how “biological consciousness would fundamentally alter our sense of what human communities could be” and how “in the adaptive model of nature lie design ideas that will enable humans to create societies and cultures as beautiful and as significant as any that have thus far existed”.

Bruno Latour takes interest in the so called nature / culture dichotomy and argues that it has become untenable. In *An attempt at a “Compositionist Manifesto”* (published in 2010) he talks about how “everything happens as if the human race were on the move again, expelled from one utopia, that of economics, and in search for another, that of ecology” and that perhaps it is time to “innovate as ever before, but with precaution” if we are to build a livable and breathable “home”.

This is what I know will happen in Stavanger. I am also trying to involve the Norwegian Gastronomic Institute in Stavanger in the project. I am hoping that we can make a larger outdoor *Azolla* cultivation somewhere and experiment with *Azolla* cooking together but nothing is set yet.

Throughout the summer I will also be working with Oloph Fritzén and Jenny Olofsson, farmers at Hästa gård, a 180 hectare urban farm in Stockholm. We will try to make some kind of *Azolla* installation on the farm and grow *Azolla* to use as mulch and as fodder for the farms animals.

In September I will exhibit “The Azolla Cooking and Cultivation Project” at the Halikonlahti Green Art Trilogy in Finland. For that exhibition I am collaborating with Tiia Paju, a gardener who will be growing *Azolla* in Salo during the summer. During the opening weekend of the exhibition I will be facilitating an *Azolla* kitchen where people can drop in and experiment with *Azolla* cooking.

RD *Azolla* has been used for biological fertilizer and as animal fodder. At some point in the booklet, you call it ‘not super tasty’ and you even add further on “To sum up you eat *Azolla* on your own risk. It might be healthy and it might not.” That was quite a warning! So what is your aim with “The Azolla Cooking and Cultivation Project”? To convince people that it is a valuable food resource? Or rather to enter in a broader discussion about the future of food and food production for example?

ES I am trying to find out if there is any real potential in *Azolla* as a food for humans but I haven’t reached any conclusions yet and I want that to be clear. As far as I know no studies have been carried out on the effects on humans of *Azolla* consumption so no one really knows weather it is healthy or not. But I will rewrite that sentence before the booklet is published. I don’t want to overemphasize the risks either. Apart from potentially being a new foodstuff *Azolla* has many applications, as fertilizer, animal fodder and for biofuels for example. I want to disseminate this information so that people can find appropriate uses for *Azolla* but I don’t want to “sell” *Azolla* or give any illusions that it is a panacea.

I am interested in how we produce our food today and could be producing it in the future and I try to get some insight into this by looking at how *Azolla* can be used in agriculture. When I started to work with “The Azolla Cooking and Cultivation Project” I knew very little about agriculture. Now I know enough to be convinced that the industrial agriculture we have today is a dead end and that we ought to move towards an agriculture based on a diversity of species working together in stead of ever larger monocultures dependent on fossil fuel driven machines, synthetic fertilizers and pesticides. The way I see it this is not a matter of going back to a pre-modern agriculture but of putting together both old and new knowledge of how the world functions and creating something that we have never had before.

*Azolla* has been used as an organic fertilizer in rice paddies for thousands of years in parts of China, but it is not until recently that this practice has started to spread to other parts of the world.



The author harvesting *Azolla* at Färgfabriken in Stockholm



*Azolla* soup and *Azolla* balls with rice noodles at Färgfabriken in Stockholm

Experiments with *Azolla* in rice cultivation has for example just started in Italy where rice producers have problems with pollution and depleting soils. Using *Azolla* as an organic fertilizer in rice paddies is great, but when it becomes really interesting is when even more species are introduced in the paddy. A farmer in Japan, where *Azolla* commonly is regarded as a rice paddy weed, has recently shown that if rice is co-cultured with *Azolla*, fish and ducks in the same paddy you can get greater rice yields than with conventional rice farming while at the same time getting fish, duck meat and eggs. I think that systems like these are really promising and that what we need to do is to develop an agriculture with both a great diversity of systems and great diversity within the systems themselves.

RD How does the public react to your project?

ES Most people I have met are really curious and enthusiastic about the

project. It is fun to look at, touch and eat a plant you haven't heard of before. Especially one as odd as *Azolla*, a floating fern that lives in symbiosis with a cyanobacteria and grows like crazy. I also think that a lot of people are inspired by the project because it is an amateur pursuit and because it is an attempt to look at how we can improve things. The only negative reaction I have received was when I presented the project at a permaculture course. I mentioned that scientific studies have shown that cow's milk productions can be increased and that chickens gain weight if they are given *Azolla* as a supplemental fodder. This prompted some strong negative reactions from a participant who associated this with pushing animals too far and treating them as biological production units rather than conscious beings. There was also a discussion around the appropriateness of introducing *Azolla* in agriculture in Sweden where it isn't an indigenous species. If *Azolla* would be introduced in the wrong environment it could become a problem. There are already examples of this having happened in Iran for example. However, I have found a Swedish garden enthusiast who has been growing *Azolla* in a pond in Stockholm for the past ten years without it ever surviving the winter so I don't think we need to worry about it spreading uncontrollably at these latitudes. These are relevant concerns though.

I am interested in our notions of what is "natural", how these notions are connected to language and aesthetics and how they are tied to how we relate to the past, the present and the future. I think we need to look beyond appearances at how things actually function and consider both new and old practices.

RD The nickname of *Azolla* is "super plant". How come I read all those health magazines full of "super food" articles and I have never heard about *Azolla*? Could it become the new Tofu one day?

ES I don't know why the health food industry hasn't picked up on *Azolla* yet. My guess is that they just haven't heard of it, though it seems strange. I don't think it would be difficult to market *Azolla* as a health supplement, like spirulina, and make a profit from it. I have been contacted by people who have been interested in growing *Azolla* as health food and I have been asked if I have intentions of doing this myself, which I don't.

Tofu and in particular Quorn are interesting foodstuffs. Many people don't know what they are made of or how they are made but they still eat them.

Quorn is also interesting because it is a newly invented foodstuff. In the 60's it was predicted that by the 80's there would be a global famine and shortage of protein-rich foods. Quorn is the result of research that was done in response to this. The fungus that Quorn is made from was discovered in 1967. After it had been evaluated for ten years the company that makes Quorn got permission to sell it for human consumption in the 80's. The global famine never happened but Quorn ended up being a great vegetarian substitute to meat. I don't find it unlikely that *Azolla* could be turned into a foodstuff like Quorn or Tofu with the right processing, but a lot more research has to be done.

RD In the introduction of your booklet you thank Masamichi Yamashita at Japan Aerospace Exploration Agency (JAXA) because his work, you write, has inspired this project. What did JAXA make with *Azolla*? Did they manage to successfully include it in a diet? What was in it in JAXA research exactly that triggered your idea to work on a project about *Azolla*?

ES I was impressed that by designing systems similar to the rice-duck-fish-*Azolla* system I mentioned earlier, and including *Azolla* in a human diet, it would theoretically be possible to grow all the food a human needs in an area of 200 square meters. That is less than a hundredth of the area the average Americans food production occupies today. This made me curious of what *Azolla* tasted like and since I couldn't find any *Azolla* recipes or satisfying accounts of what *Azolla* tasted like anywhere I decided to try to grow it and cook it myself. For many people space and the future are synonymous so I thought it would be interesting to look into how we produce our food today and could be producing it in the future using space agriculture research as a starting point. I think a lot of valuable knowledge can come out from research on space colonization but at the same time I find our fascination with it kind of peculiar. I recently watched Werner Herzog's *The Wild Blue Yonder* where a researcher talks enthusiastically about how in the future we will be living and working on asteroids and going to Earth on vacation. Why would we want to do that? Living on an asteroid and eating *Azolla* doesn't sound that appealing to me. I would rather see that we try to find ways of co-existing with the diversity of species that we still have left here on Earth so we can continue to have varied food.

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