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Florophilia is Legal!

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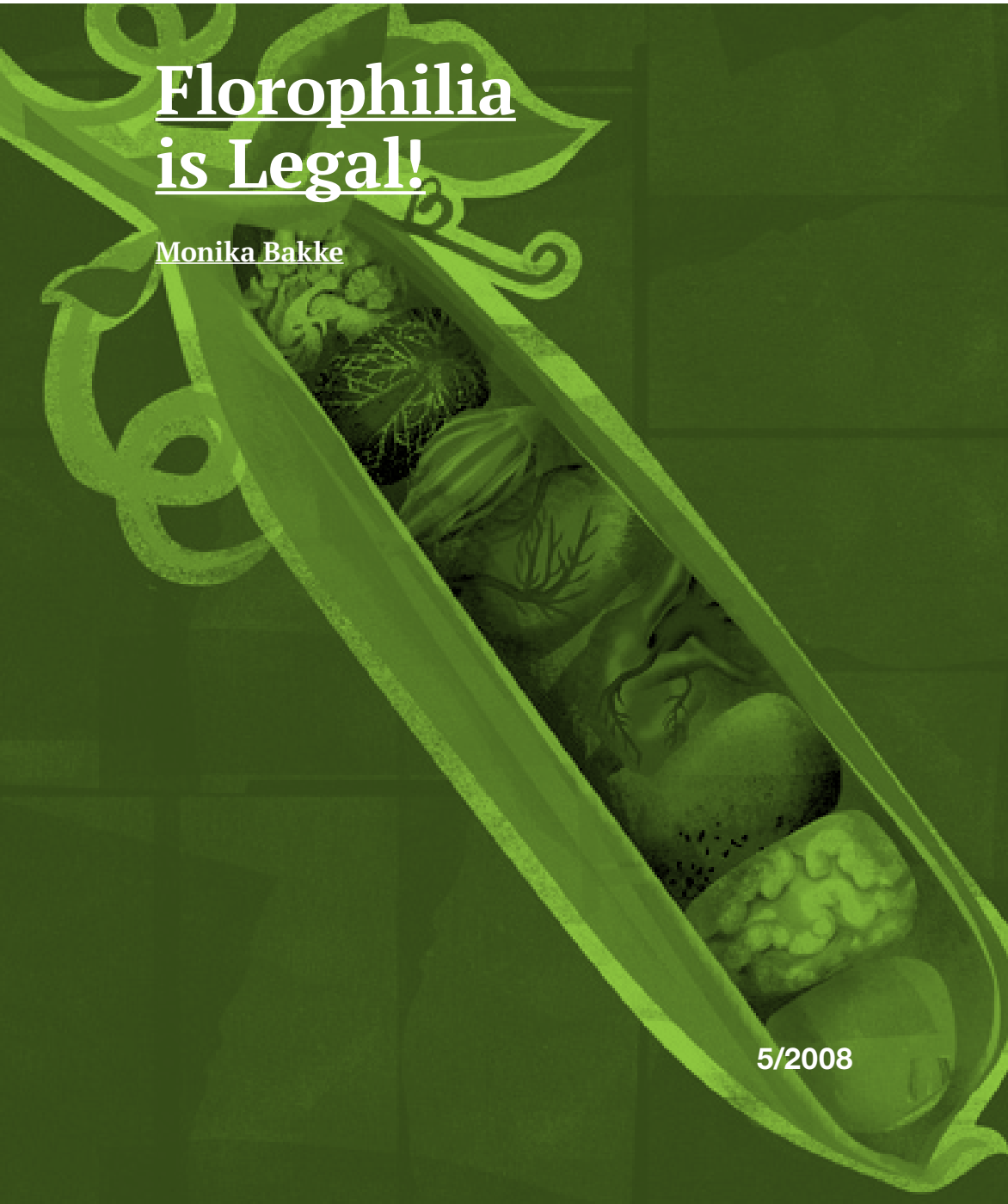

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Interspecies sympathies

"I can't say that I'm happier with plants than I am with people, but I am more at peace with plants, and on the whole feel freer with them,"[1] writes George Gessert, a French artist working with plants for three decades. He adds that "plants are literally unimaginable. No one could dream up a wild iris."[2] Plants are everywhere; they shape us and our way of thinking much more than we are able to influence them. "I trust their power more than I do ours,"[3] writes Gessert, knowing that we would be unable to live without plants. Of course, we view them primarily through the lens of our physiological needs, such as breathing and eating, but we also traditionally treat plants, both wild and cultivated, as objects of aesthetic contemplation. We are much less likely, however, to think about plants in the context of our sharing a common genealogy, because our bodies are so different from theirs. Plants, however, are

1 G. Gessert, *Why I Breed Plants*, [in:] *Signs of life. Bio Art and Beyond*, ed. E. Kac, Cambridge, Mass. 2005, p. 185.

2 Ibid., p. 196.

3 Ibid., p. 197.

our ancestors, life forms that inhabited the earth long before us. They have their own strategies for survival and complicated relationships with other forms of life, such as animals, which they not only allow to eat them, but which they are also able of using themselves. However, as a consequence of the Aristotelian hierarchy of beings, and later, the influences of Christian thought, plants have undergone an almost complete degradation and objectification.

Philosophers on plants

Philosophising about plants – according to the oldest traditions – means, above all, reflecting on their souls, that is, over what they are capable of doing. Empedocles, inspired by Pythagorean thought, preached that plants have a soul, and are guided by common sense and even reason, as evidenced by their responding to their environment, i.e., directing themselves toward the sun. Plato shared the view that plants are endowed with a soul, though one "which shares not at all in opinion and reasoning and mind but in sensation, pleasant and painful, together with desires."[4] This is the same kind of soul that in humans is located "between the midriff and the navel". "Wherefore it lives indeed and is not other than a living creature, but it remains stationary and rooted down owing to its being deprived of the power of self-movement."[5] Yet plants also possess great energy that "our Superiors had generated [. . .] as nutriment

4 Plato, *Timaeus*, 77b, *Plato in Twelve Volumes*, Vol. 9, trans. W.R.M. Lamb, Cambridge, Mass.–London 1925.

5 Ibid., 77c.

for us inferior beings".[6] Plato thus has no doubts that plants have been destined by the gods to serve people. Aristotle deprived the vegetative soul of additional capabilities, but believed that it was what gave plants the ability to take nourishment, grow and reproduce. And while Aristotle believed that "plants are to some extent 'animals reversed' head to the bottom, legs on top – because their mouths (roots) are stuck in the ground, their legs (stems) protrude above the ground,"[7] they could not truly be categorised as animals. They do not possess the faculties of the senses or feel emotions, nor do they have the ability to move from place to place. And yet, as Aristotle assumed, both animals and we humans possess authority over plants, without which we would be unable to live. Theophrastus, who was a student and colleague of Aristotle, and is considered the founder of botany, did not completely agree with his great teacher. He believed that plants are sensitive creatures, capable of movement and of falling asleep. It is to Theophrastus that botanists owes their professional nomenclature, for example, the division of plants into roots, stems and leaves, root morphology, *et cetera*.[8]

A complete rejection of ancient animism is found in "Man-plant", a very peculiar treatise, written in modern times by the infamous eighteenth-century scandalist, physician and philosopher, Julien Offray de

6 Ibid.

7 P. Siwek, translator's footnote (14), [in:] Arystoteles, *O duszy*, Warszawa 1988, p. 178.

8 See Teophrastus, "Przyczyny powstawania i rozwoju roślin", *Fizjologia roślin*, TN KUL, Lublin 2002.

La Mettrie. As befits a materialist, La Mettrie refused to grant plants a soul, but more surprisingly, also refused a soul to animals and humans. In "Man-plant", he draws analogies between the construction of plant, animal and human bodies, writing for example, that "the lungs are our leaves, which replace this organ in vegetals, as in us the organ replaces the leaves, which we lack."[9] This is meant as evidence of the unity of the worlds of plants and animals. Human superiority over other forms of life results, however, not from the existence of some immortal soul, but rather from a different organization of matter. Thus, what connects us with the world of plants is not that we all have a vegetative soul, but the fact that we have no soul at all, being comprised simply of living matter. The unity of life also interested Hegel, but, of course, in the spirit of idealism. In the *Encyclopaedia of the Philosophical Sciences*, he refers to Goethe's *The Metamorphosis of Plants*, which, he wrote, "marks the beginning of a radical conception of the nature of plant-life, in that it has forced attention away from a concern with mere details to a recognition of the *unity of life*."[10] According to Hegel, plants are very simple beings, which although they are distinct, living beings – in the sense of being individualities – do not possess subjectivity or a sense of self. In contrast to mobile animals, they are merely a part of their environment and, as we read in the *Encyclopedia of the Philosophical Sciences*: "the plant is not yet a self-subsistent subjectivity

9 J. O. de La Mettrie, *Man as Plant,* [in] *Machine Man and Other Writings*, Cambridge 1996, p. 78.

10 G. Hegel, *Philosophy of Nature*, *Being Part Two of the Encyclopaedia of the Philosophical Sciences* (1830), trans. A.V. Miller, Oxford, Clarendon Press, 2004 p. 311.

over against its *implicit* organism (§ 342), therefore, it can neither freely determine its place, i.e. *move from the spot*, nor is it for itself, in face of the physical particularization and *individualization* of its implicit organism."[11] Living permanently in one place, the plant therefore draws its nourishment in a continuous manner, and its food are the elements. A plant is thus distant from animals, since "still less capable is it of animal heat and feeling, for it is not the process in which its members – which are rather mere parts, and are themselves individuals".[12] This view was inherited from the ancients, who believed that every part of the plant was capable of autonomous existence. Hegel placed plants far from animals, and closer to the world of chemical processes, which is closer to inanimate nature, writing that: "The shape of the plant, as not liberated out of individuality into subjectivity, is still closely related to geometrical forms and crystalline regularity, and the products of its process are even more closely related to chemical products."[13] Thus "is the plant drawn out of itself by light, by its self which is external to it, and climbs towards it, ramifying into a plurality of individuals. *Inwardly*, the plant draws from light its specific energy (*Befeuerung*) and vigour, the immaterial quality of scent and of flavour, the splendour and depth of colour, and the compactness and robustness of shape."[14]

11 Ibid., p. 305.
12 Ibid.
13 Ibid., p. 311.
14 Ibid., p. 336.

Just between us plants

Today, when in the spirit of questioning anthropocentrism we re-formulate questions about plants, and, in particular, when we ask who are they for one another, we return to the thoughts of La Mettrie, though without the burden of a hierarchy of beings. What much plant is in us? How vegetative are we as human beings? What does our plant life mean to us? Let us look at the plant side of humanity. Our goal is not, however, to make people into plants or plants into people, but above all, we are interested in the relationships and continuations, coexistence and symbioticity between plants and animals, including the human animal.

In spite of the fact that we do come from plants – our common ancestor was probably a species of algae – we generally do not think of them as life forms that differ dramatically from us; however, like us they exchange matter with their environment, grow, reproduce and die. Plants as beings seem so remote from us that generally we do not feel any sense of empathy towards them. In the popular, metaphorical sense, a person can be reduced to a vegetable, when as a result of injury or disease, they become unconscious, lose self-control or the ability to communicate with their surroundings, do not respond to stimuli, are incapable of moving, etc. Not all of these features are specific to plants, but are merely a human projection of undesirable traits onto forms of life that we denigrate. However, plants respond to both positive stimuli from the environment (light, food) and threats, and thus control their body. What's more, plants communicate with their environment,

among themselves, and with other life forms, including, insects and birds; their language is not based on sound waves, but primarily on chemical messages. If we take into account the movement of the plant, it is clear that they operate on a different time scale than humans – in relation to us they lead a somewhat slower life. The mimosa fascinates us because to a certain extent it operates on a time scale similar to ours'; its movements are noticeable to us, as in the case of some carnivorous plants that are able to instantly react to their victims, closing them inside their own bodies. Today, thanks to film techniques that allow us to shorten long observations, the visual dynamics of plant bodies has entered our world. Their quiet and somewhat hidden life is full of dynamics invisible to the eye. Maurice Maeterlinck knew this when he wrote: "This plant world that strikes us as so tranquil so resigned [...] is on the contrary one wherein the revolt against destiny is at its most vehement and most obstinate."[15]

Green Intelligence

The Intelligence of Flowers, a philosophical essay on nature by the Flemish Symbolist and Nobel Prize laureate Maurice Maeterlinck, published in 1907, remains intriguing. In it he states: "It is not only in the seed or flower, but in the whole plant, stems, leaves, roots, that we discover, if we but lower our heads for a moment over their humble work, man traces of a lively and shrewd intelligence."[16] In recent years, along with a rise in interest in the specifics of plant life, plant intelligence has once again in the his-

15 M. Maeterlinck, *The Intelligence of Flowers*, Albany 2007, p. 11.
16 Ibid., p. 8.

tory of botany become an issue. Among the fervent proponents of this idea is British biologist Anthony Trewavas, who in a highly controversial article entitled "Aspects of Plant Intelligence" argues that "although as a species we are clearly more intelligent than other animals, it is unlikely that intelligence as a biological property originated only with *Homo sapiens*."[17] He also believes that the lack of interest in plant intelligence and distrust of research on it results from a persistent, ossified conviction among scientists that plants are essentially automatons. Unfortunately, changing traditional beliefs is very difficult, but it does seem possible because this issue is part of a broader tendency to view life as a continuity. Trewavas hopes that studies on plant intelligence will continue regardless of whether this direction of research is universally accepted.

In his writings on plant intelligence, Trewavas uses a definition of intelligence proposed by Stenhouse, who has studied it in animals and who understand it thus: the more intelligent the organism, the greater its ability to adapt.[18] In plants, intelligence is a trait that reveals itself in developing forms of life thanks to cooperation among various tissues responding to environmental conditions, which can be seen in the appearance of its body.[19] Commonly known plant behaviours include, bending in the direction of the light, which results in fuller development of the branch or stem on that side, and, in certain conditions, roots growing shallowly and in others, deeply.

17 A. Trewavas, "Aspects of Plant Intelligence", *Annals of Botany* 92/2003, p. 1.
18 Cf. Ibid., p. 1.
19 Ibid.

Plants are intelligent, although, of course, they have no nerve cells or specialized neural systems, and, even more clearly, no brains. Trewavas has called intelligent behaviour in plants "mindless mastery". But isn't it the case that we have narrowed the concept of intelligence precisely in order to create a gap between us and other life forms? Trewavas believes that vegetative life forms need not possess reason to analyze their situation in relation to the world around them. Their body's cells are the basic units used by plants to analyse information. As these tissues develop, they form a network, and "each individual plant (genet) accumulates tissue (ramets) with different computational capabilities, so reflecting the history of experience."[20] In this way, "successive plant tissues act as repositories of memory of environment states which, if such information can be conveyed elsewhere, contribute to the whole plant assessment."[21] This is what we call "body memory", a term often referred to, but only in regard to the human body. As Trewavas points out, "[t]heoretically, every plant body contains its environmental history".[22]

Floral bondage

We surround ourselves with plants because we enjoy marvelling at them; not for their intelligence, but for their appearance, though perhaps these two features should be combined, bearing in mind the extremely sophisticated means of pollination developed by some plants. We are particularly fascinated by flowers, which, as plant sex or-

20 Ibid., p. 14.
21 Ibid.
22 Ibid.

gans, exist precisely in order to arouse interest: in insects, birds and in other animals, including humans.

The human tendency to admire flowers has long be dictated by the laws of the market – people began crossing plants for decorative purposes long ago, and the most spectacular results are reflected in the arts. An excellent example of this is found in floral arrangements seen in Dutch still lifes. Norman Bryson writes that such painting is even antipastoral.[23] The depicted flowers do not represent the wonders of nature; on the contrary, their existence is the result of a tremendous amount of work, knowledge and financial resources, "the labour of horticulture, the forcing of varieties, and then the long hours of the painter's craftsmanship – it is as if the value of flowers were created by human effort alone. Production, production! Of new flowers, of knowledge, where nature is commodified by market forces, along with human work."[24]

The Dutch still lifes with flowers also act as a kind of catalogue, or even a plant systematics, which in those days was a way of producing knowledge not only about native plants, but also foreign ones, eagerly brought home after returns from distant journeys overseas. Artists at that time often collaborated with botanical gardens, and, intrigued by what they saw, introduced this experience into art in the form of sketches and paintings. The twentieth century

23 N. Bryson, *Looking at the Overlooked. Four Essays on Still Life Painting*, *Reaktion Books*, London 1990, p. 104.

24 Ibid., p. 110.

brought a specific extension of this medium in the inclusion of living plants into the arts; plants were thus not only represented, but began also to be present, in art. Artists appeared who bred their own plants, treating this as an artistic practice, and the effects of their work, the plants themselves, began to be shown in galleries.

Plants – a work of art

Flowers, traditionally a frequent theme in art, themselves became objects of art when a well-known American photographer, Edward Steichen, presented the finest specimens of delphiniums from among those he had grown. Not in photographs, but directly – as works of art. Writing about Steichan's New York exhibition *Steichen Delphiniums* (Steichen's Larkspurs) in 1936, Ronald J. Gedrim said that it was "one of the most unusual and least understood exhibitions of MoMA's history."[25] Steichen exhibited an impressive collection, in terms of size and colour, of cut blue larkspur flowers – plants he had been crossing himself on a large scale and with great passion for twenty six years. The exhibition lasted only a week due to the need to replace the flowers with fresh ones, so several hundred individual items were ultimately exhibited.

In MoMa's official press release, a somewhat disoriented audience could learn that Steichen's actions were guided by a desire to extract as much aesthetic potential from the larkspur flowers as possible. The flowers were indeed impressive, but the gallery's banal comment does not

25 R. J. Gedrim, "Edward Steichen's 1936 Exhibition of Delphinium Blooms: An Art of Flower Breeding", [in] *Signs of Life*, op. cit., p. 347

explain either the great interest this unusual exhibition aroused, nor the great wonder it evoked.[26] It was not an exhibition in the Museum of Natural History, and therefore one can wonder whether the main issue was the astonishing beauty of the flowers of this patiently grown variety, or perhaps, rather, the amazing fact that this was the first time plants had been treated as an artistic medium, and that their life itself and their propagation had become realms of artistic activity. On the day of the exhibition's opening, Steichen stated that: "I have learned more about people and human nature from raising flowers than you would believe. Flowers are just as gullible as human beings. They respond to the same stimuli [...][flowers] have verified all my concepts of human behaviour."[27] It seems, however, that Steichen was expressing disappointment in human behaviour in that particular historical reality, namely the crisis and rampant fascism in Europe. On the other hand, his practice was compared with fascist eugenics, because in growing his plants, he had a sense of mastery over them, and in his search for the perfect specimen, he carried out mass exterminations of individuals who did not fulfil his expectations.[28]

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26 In the modernist era, such a work of art was closest to the creative expression of the Dadaists and Surrealists. Art should not be in a museum, but part of life, and, as Gedrim writes, these views were shared by Steichen himself, for whom art belonged to everyday life. However, he did not underestimate the role of art as an institution as a court deciding what is and what is not art. Steichen wrote that his exhibition at MoMa "was the only time that living plant material had ever been shown by the Museum. By implication, flower breeding was recognized as one of the arts". Ibid., p. 353.

27 R. J. Gedrim, op. cit., p. 356.

28 Steichen himself helped create this type of criticism, writing in 1938: "Plants are pretty much like humans. They are gullible. You can fool them just as Hitler leads his army. You can make them do almost what you will." Which, in turn, is what the artist himself did. Cf. R. J. Gedrim, op. cit., p. 357.

George Gessert is another artist, who in an art gallery in 1988, exhibited live plants that were the result of his genetic, but also artistic, experiments. He started with wild plants and, as he explains, his search for wild varieties of irises allowed him to look at the environment in a new light. His practice consisted of, among other things, exploring areas where irises grew, becoming familiar with their ecosystems, requirements and preferences, as well as learning how to recognize subtle individual differences between them. Gessert later also experimented with other plants, commonly known species of ornamental flowers, such as poppies and cape primrose (*streptocarpus*), and, sharing his experiences, wrote: "After eight I am still trying to figure out just what streptocarpuses are. This is one reason that I still hybridize them. Plant breeding is a way of getting to know other beings."[29] At the same time, as he emphasized, the propagation of plants is the slowest art, but one that allows us to see time on an evolutionary time scale and that reveals our ignorance and lack of control over the processes of life. Of course, this concerns the perception of plants as life forms situated in the context of a whole system of symbiotic dependencies, and "[s]ince plant breeding is a hunt for life that does not yet exist, it suggests the possibility of modified ecosystems, and even new ones."[30] In order to modify ecosystems, Gessert practiced so-called "genetic graffiti", which consisted of spreading the seeds of irises he had grown by himself in places overgrown with wild plants. His interference was virtually undetectable.

29 G. Gessert, op. cit., p. 196.
30 Ibid.

As the artist pointed out, the wild irises he grew by means of cross-breeding could not compete aesthetically with commercially grown varieties, which he called the "commodification of life".[31] He refers to his own art, however, as "genetic folk art", because it arose as the result of a conscious rejection of opportunities offered by work conducted in specialized laboratories using genetic engineering methods. Modern genetics is thus commercialising life, while art, according to the artist, shows other paths.[32]

Shared lessons

The practice of growing and cross-breeding plants over thousands of years has significantly affected their appearance and way of life, but now that genetic engineering allows for direct interference in the DNA of the plant, we are beginning to have a wide array of doubts. Of course, it is not ornamental flowers that arouse the greatest interest and anxiety, but most of all, the plants we eat, and which thus become part of our own bodies. The most genetically manipulated crops include corn, soybeans and wheat. The first of these, in particular, drew the interest of the American artists Matias Viegener and David Burns, who viewed with alarm the consequences of genetic manipulation, including a decline in biodiversity, the modification of entire ecosystems, the privatization of genomes and control over them by corporations motivated solely by profits. The artists created a humorous but informative

31 Gessert stresses that it must be remembered that the domestication of certain species is practiced not only by men, but by other animals, such as ants, as well.

32 G. Gessert, op. cit., p. 196.

work, which also provides a critical commentary on the aforementioned negative phenomena.

Corn Study is an educational project focused mainly at corn, but it does not exclude other plants, or, more specifically, their seeds.

In it, the artists attempted to break from the shameful practice in *Homo sapiens* of exploiting other species, which are deliberately deprived of any ability to influence their own fate. The creators of *Corn Study* believe that by educating plants from the seed stage, you can achieve the best learning results (a reference to hypnopaedia, a method proposed by Aldous Huxley, involving education from the embryonic phase, when content is communicated to the unconscious). During the *GardenLAb* exhibition, held in Los Angeles in 2004, the artists organized a school for corn plants, whose developing seeds were educated by means of the teaching process. During the lessons, individual plants were divided into groups, and given instruction in human psychology and sociology, economics and trade, the history of colonialism, foreign languages, and current events. This knowledge would optimally then be exchanged between plants independently and in accordance with the needs of the entire population. The artists' prevailing goal – as they admitted – was to allow the corn plants to decide for themselves "with their own voice" and to learn something about people – their creators. Today, plants have lost their identity as a result of their total enslavement by an alien species, and the

fact that their genetic identity, given to them by humans, has been thoroughly commercialized. The artists are therefore demanding changes in the development path of corn that would allow it to benefit, as well. In carrying out *Corn Study*, the artists do not make use of genetic engineering because they are not supportive of genetic manipulation, although they do not see any possibility of a retreat from it. In their critical work, however, they suggest the need for education and public debate on the subject. Most often, unfortunately, we remain passive witnesses to genetic experiments and unreflective consumers of their products.

Florophilia is everywhere. We have long been able to see evidence of this in philosophy, botany and art, but also among florists, gardeners and cooks. Today's world, however, confronts us with technologies that may forever change plants into something we do not yet know. Perhaps artists are now the ones with the best chances of confronting the average consumer of plants with new contexts for thinking about these forms of life, which would otherwise usually remain inaccessible to him, hidden away in the specialised language and jargon of scientific journals and closed off in laboratories.

translated by Thomas Anessi