Exploring Multispecies Assemblages in Roman Urban Gardening Initiatives

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Abstract: In this article I will discuss the potential of using the assemblage thinking in multispecies ethnography, as a method for developing post-anthropocentric situated accounts. It is an extremely relevant tool with which to relate to make emerge how space is co-constructed through hybrid associations of human and nonhuman actors, which exceed human intentionality. Reading entanglements through a material-semiotic approach provides interesting analyses of the exploitation of the nonhuman on a global scale, but also offers stories of possible situated multispecies relationships of care. These relations are not universal essences, but situated entanglements in which nonhuman actors play an active role. Relying on STS feminist reflections, focusing on care could have the potential of unveiling less anthropocentric more-than-human relations, showing how beings depend on each other.

Keywords: urban gardening; post-anthropocentrism; Ailanthus Altissima; Mellifera Bee; multispecies ethnography.

Submitted: December 31, 2020 – **Accepted:** February 11, 2022

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1. Introduction

I start watering and I realize how I fell back again in logocentrism. I still feel restless. After several minutes, the only human in the garden, I begin to slow down. Finally, the nonhuman presences that cohabit and co-build this place are opened to my gaze, to my touch, to my hearing, to my nose. In watering, my skirt gets wet, my hands get dirty with soil, which sticks to my wet skin, giving a feeling that my body perceives as anything but pleasant. But that reveals my contact with otherness. Plants have grown tremendously since the last time I saw them. The plot is teeming with plant

TECNOSCIENZA
Italian Journal of Science & Technology Studies
13 (1) pp. 47-69 - ISSN 2038-3460
www.tecnoscienza.net

2022

life, it is almost impossible to see the soil. It is a whole tangle of plants. Watering, I make my way through the chickpea plants. Many green buds have begun to form on the ends of their stems. In the ground, which is now muddy from the water I poured, thousands of ants move swiftly, creeping up my leg, pricking me. Still wet, I scratch my hands. As always, I perceive on the skin the physical layer that I am used to consider as the physical boundary between my body and the rest of the world, and I consider how the interaction with nonhumans, like any relationship, needs time, practice, attention and knowledge. (Field note, June 2018)[1].

In this article I will discuss the potential of reasoning *with* and *in* material-semiotic multispecies assemblages[2], relaying on an ethnographic research I carried out in a Roman shared urban garden named "Tre Fontane". In the text, I will present two nonhuman figurations that cross the garden, the *Ailanthus altissima* and the *mellifera* bee. In Haraway's terms (1985; 2016), figurations are not just metaphors. They are situated and embodied entities that can allow questioning anthropocentrism at a material and discursive level through multiscalar relational accounts of the world.

Figure 1. Mellifera bee in the garden Tre Fontane.

Humans-plants relationships have been highly disregarded among social sciences till very recent times. In the last decade though, humans-plants assemblages started to be investigated, in particular by new materialist (Breda 2017; Mayers 2015), multispecies (Hartigan 2015), and more-than-human (Barua 2014; Hinchliffe and Whatmore 2005; Hinchliffe et al. 2006; Pellegrini and Boudry 2014) accounts. In this line, I will proceed to the analysis of the co-creation of the garden area as vegetal politics[3] (Head et al. 2014). On one hand, institutional policies and politics pursued by active citizenship groups "on" the vegetal – i.e. the transformation and management of green areas – can implement mechanisms of spatial injustice. On the other hand, the analysis of interactions between humans, vegetal, and other-than-human actors can demonstrate the non-human capacity for action and transformation, well outside the boundaries of human intentionality. In this sense, politics is disconnected from anthropocentrism and logocentrism. It becomes intended as the continuous interaction of different actors (both humans and nonhumans) in a public forum (Certomà 2016). Rather than focusing on narratives and universal ideologies, this material-discursive politics is relational, "embodied and embedded" (Braidotti 2013, 51). The interactions that emerge can be of alliance, indifference or conflict, but they necessarily question the exceptionalism of the human subject (Head et al. 2014).

Urban spaces are privileged sites where to study the intertwining between human and nonhuman actors within a historical perspective, investigating the nexus of cultural, material and discursive dimensions. According to European thought the city has been extensively conceived as a human space purified from nature (Rudolf and Taverne 2012), as the triumph of the Man (Franklin 2017). However, contradicting these narratives, other-than-human entities actually continuously cross and transform urban spaces, far behind human intentionality (Certomà 2016). For these reasons, the city turns out to be an interesting and relevant field of investigation to try to question the dichotomies between nature and culture/society, between rural and urban, between territories to be preserved and those to be exploited through post-anthropocentric accounts.
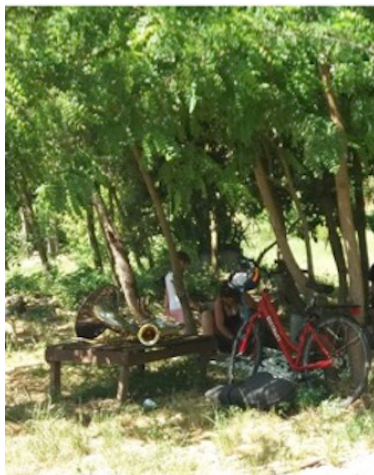
Figure 2. Urban garden Tre Fontane.

Shared urban gardens are a part of a broader range of environmental citizen-based activities (guerrilla gardening, movements for the right to access to lands, environmentalist *in situ* protests, animal sanctuaries) that take place more and more in everyday life spaces of highly urbanised industrialised countries (Marres 2012; Schlosberg and Cole 2015). There is a broad body of literature on urban gardens that recognises them as public spaces of social (Mougeot 2005; Ferris et al. 2001) and political (Certomà 2016; Follmann and Viehoff 2014; McClintock 2014) experimentation, individuating them as examples of "new commons" (Eizenberg 2012) that can contrast urban social injustice (Barron 2016). However, in this body of literature, there are also relevant positions that identify urban gardening as practices that could enhance the neoliberalisation of cities (Pudup 2012) and green gentrification (Anguelovski et al. 2018; Dooling 2009; Holifield et al. 2018). Situating my view within this debate, I argue that urban gardening initiatives could also be investigated as differentiated products of continuous messy interactions, shaped by situated conflicts and alliances, collectively generated through relational modalities (Tornaghi and Knierbein 2016), and constantly re-defined through material-discursive practices.

Aiming at analysing vegetal politics of the multispecies garden assemblage through a post-anthropocentric approach, in the next paragraph I will start by providing some elements of my own positioning within the stream of STS, posthuman and new materialist feminisms (Alaimo and Hekman 2008; Bennett 2010; Braidotti 2013; 2016; Breda 2015; Coole and Frost 2010; Ferrando 2016; Haraway 2008; Oppermann 2016; Tsing 2015). That is, a stream of feminist and post-anthropocentric approaches,

which deconstructs and connects gender and species hierarchies, as culturally and politically shaped. The post-anthropocentric posture shared by this range of feminist approaches will drive my analysis of vegetal politics in Roman urban gardening. Entering a multispecies assemblage as a research practice is a descriptive and analytical attempt that seeks to respond to an urgent challenge that arises in the human and social sciences: to take seriously the role of nonhuman agency, understood as shared and relational, in the co-construction of the social.

In the text I will start by providing some theoretical and methodological positioning elements, focusing in particular on the difficulties and potentialities of reasoning with and in material-semiotic multispecies assemblages. Afterwards I will proceed by briefly outlining the ethnographic context in which I carried out the research, that is a Roman shared urban garden named "Tre Fontane garden". I will then move to present two nonhuman figurations that cross the garden, the *Ailanthus altissima* and the *mellifera* bee.

2. Theoretical Framework

STS, posthuman and new materialist feminisms reclaim a central role of materiality and the nonhuman in co-constructing the world and emphasize the importance of accounting for them in social inquiries. They give emphasis to the material relevance of both bodies[4] and the world, trying to move beyond discursive construction and materiality divisions. Particularly enlightening for the analysis I will carry out is the notion of "material-semiotics" proposed by STS feminist scholar Donna Haraway (in Alaimo and Hekman 2008), which, refusing to separate the two terms, clearly underlines their deep and continuous co-influences. Following Haraway's conceptualisation of material-semiotics, in the analysis I will attempt to frame nonhuman actors as capable of affecting and co-shaping our common world both at a material and discursive level. In fact, in this perspective, nonhumans are not simple objects of knowledge, but actors actively involved in more-than-human meaning and knowledge production processes (Haraway 2016; 1991). That is, "everything or every being is materially and discursively generated" (Certomà 2016, 82) relationally.

Because of their interest in materiality and the nonhuman world, and their wish to decentre the human subject from the core of action and social investigation, posthuman, STS and new materialist feminisms are also post-anthropocentric accounts. Post-anthropocentrism in general challenges the separation between human life (that is "bios") and animals' and nonhumans' life (that is "zoe") (Braidotti 2013; 2016). In this vision, life stops being "the exclusive property or the unalienable right of one species, the human, over all others or of being sacralized as a pre-established given", to become a "process, interactive and open-ended"

(Braidotti 2013, 60). The nature-culture divide is discarded as a ruinous dualism not only for "nonhuman nature", imagined as "an inert ground for the exploit of Man" but also for women, indigenous people, and other "marked groups" (Alaimo and Hekman 2008, 4-5). In this sense, the convergence between feminist and post-anthropocentric theories has been read as a radicalisation of "the very premises of feminist philosophy" (Dolphjin and Van der Tuin 2012, 25) and of its ethical and political commitments.

Agency is therefore disconnected from anthropocentrism, as it does not necessarily originate from a human intentional subject (Iovino and Oppermann 2012). It becomes the capacity to relationally affect the co-constructed world. For these post-anthropocentric approaches, nonhuman world is agentic, and its actions affect both human and nonhuman actors (Alaimo and Hekman 2008) at a material-semiotic level. Nonhuman actors can change the ways in which our social world is created, conceptualised and organised, however the fact of taking account of these dimensions does not mean ending up in a new "physical determinism of social phenomena" (Passoth et al. 2012, 6). In this perspective, also the classical sociological conceptions of power are decisively redrawn. Power is conceptualised as relational, situated, embodied and contingent, and so are power hierarchies. Power has to be researched and conceived as "radically empirical […], focusing upon the affects between both human and nonhuman relational materialities within events, actions and interactions (assemblages)" (Fox and Alldread 2018, 323), and deploys through material and discursive effects (Braidotti 2016). However, power differentials are not flattened (Braidotti 2013; 2016) and should be investigated and understood in their immanent and material becoming. Situating myself in this line, in my multispecies ethnographic research, I investigated agential power of human and nonhuman actors as immanent, emerging from the field, but not flattened, and eventually conflictual.

3. Methodology

Entering a multispecies assemblage as a research practice is a descriptive and analytical attempt that seeks to respond to an urgent challenge that arises in the human and social sciences: to take seriously the role of nonhuman agency, understood as shared and relational, in the co-construction of the social. This approach also aims to create transformation on an ethical-political level. In fact, describing and understanding the world through post-anthropocentric situated accounts, also means contributing on a daily basis to build possible alternatives through the relationships we make.

Feminist STS and new materialism therefore challenge the idea that structures and scales are given (Blok and Jensen 2019; Haraway 2016;

Tsing 2012; 2015), seeing them as emergent effects of heterogeneous interactions between human and nonhuman actors. The main limits of such an approach are the risk of flattening diversities and the difficulty of including nonhuman actors in the picture while avoiding determinism (Ferrando 2016). However, the desire to study multispecies assemblages requires modes of knowledge attentive to their emergent, heterogeneous and contingent gathering. This is the main challenge and contribution of using multispecies, non-universalistic ethnography as a method (Tsing 2012).

My fieldwork in the garden has been carried out between September 2017 and September 2019. While experimenting with multispecies ethnography, I followed the everyday life of human and nonhuman encounters in the garden, considering that unexpected assemblages that could challenge historicised hierarchies can always emerge. I decided to perform multispecies ethnography with a focus on material practices in the everyday life because it is particularly revealing in understanding space production and power dynamics between human and nonhuman actors. Moreover, participant observation allowed me to trace how more-than-human agencies, relations and affects co-shape multispecies assemblages. Throughout the research process, I have always explained my role as a researcher to the people I interacted with, actively participating in the Tre Fontane garden activities, on which I focused the main part of the ethnography. My involvement in the field, including material participation (cultivating, participating in initiatives, debates, and moments of space modification) throughout the research process, allowed me to experiment and learn by doing and being with, through what has been defined observing participation (Bastien 2017), emphasising the continuous interconnection of the researcher with the research assemblage (Fox and Alldred 2015).

3.1 Multispecies Ethnography

Multispecies ethnography is a research practice largely influenced by the Harawayan conceptualization of multispecies encounters (Haraway 2008; 2015) understood as meetings between fluid, relational bodies, in becoming. In this line, the role of human and nonhuman actors co-construct the world as a continuous flowing hybrid assemblage (Kirksey and Helmreich 2010; Tsing 2015). This is a post-anthropocentric gaze that decentre agency from logocentrism (Certomà 2016; Oppermann 2017), focusing on material-discursive practices as embodied processes. The purpose of this form of ethnography "is not to represent nonhumans by speaking for them, but to tell stories of them to enable others to discover [the political agency of nonhuman actors in world-making processes]" (Pitt 2015, 52). I conducted my fieldwork accordingly, by practicing participant observation, learning with and being in the entanglement of

human and nonhuman actors (Moore and Kosut 2013a). Being shaped myself by a humanist and logocentric background, during the first months on the field I struggled with learning how to reveal the presence of the nonhuman as significant (Hartigan 2015; 2017). Hence, at the beginning of my field research I decided to let myself be guided in the interaction with the nonhumans by some garden activists who had been practicing cultivation in the area for a few years and by an activist who is in charge of managing some hives in the "Tre Fontane" garden. After a few months, I learned through their mediation how to interact and read the entanglements with the nonhuman actors who co-build and cross the garden, which initially were almost invisible to me. Moreover, I had to constantly resist the risk of identifying nonhuman situated actors as universal representatives of the species in which they are categorized by the scientific taxonomic system. "Species are generally just specimens" (Bowker 2000, in Hinchliffe et al. 2005) and not universal essences.

Fundamental in learning how to decentralize my anthropocentric gaze was to start cultivating myself a piece of land within the garden, which I did from March 2018. This allowed me to experience the interaction with the nonhuman with a daily and material approach, learning to read agency no longer as an exclusive prerogative of the human, but as a widespread and relational mechanism. This approach, which includes material participation, allows the production of a situated knowledge based on a high level of involvement of the researcher in the studied assemblage. This implies that the result of the study is not a universal crystallised understanding of the experiences studied, but a relational, embodied and transformative knowledge. More specifically, I have been following the activities (from 2 to 4 times a week), conversations and daily interactions carried out inside the garden, following materiality of both human and nonhuman actors (mainly insects and plants). I took part in the activities of the greenhouse, in beekeeping, harvesting and in weeding groups in the garden on a weekly basis. I attended around 20 assemblies, meetings and public events taking place during the period of my fieldwork. I also carried out 18 semi-structured interviews with gardeners, collected 13 articles from local newspapers focusing on green spaces management and nonhuman actors appearing in the city, from April 2018 to September 2020. I also analysed official documents and regulations produced by public institutions in charge of the management of green spaces, such as the urban gardening regulation approved in 2015[5], the urban green spaces regulation draft (that has been definitively approved in April 2021) and the Planning Activities for the Coordination of Urban Decorum regulation approved by the municipality in 2018[6]. Between 2017 and 2019 I also conducted three interviews to the person in charge of the office for urban gardens of the Roman Municipality (the "Ufficio Orti Urbani"), one interview to one of the members of the Municipal Environmental Commis-

sion, one interview with a person from the Municipal Gardening Service (the "Servizio Giardini").

3.2 Translating the Research-Assemblage through the Writing Process

"Feminism loves another science: the sciences and politics of interpretation, translation, stuttering, and the partly understood" (Haraway 1991, 95). Positioning myself into the framework of feminist knowledge-practice, I experienced the process of doing ethnography and writing field notes as an interpretative translation path, which rejected objectivizing authority and reductionist universality, in favour of the production of a partial and situated knowledge (Haraway 1991). Translation is a process capable of tracing the connections, situated associations, in which the researcher also assembles. As detailed in an interview with the anthropologist Tsing (Lassila 2017):

> Translation can be a technology of colonial rule; it can impose power […]. At the same time, translation can create room for manoeuvre as new meanings and materials are brought into hegemonic formations. (…) It's also what makes "friction" possible. Messiness gets inside articulations, which work through their equivocations. New identities and trajectories are formed in the process, for better or worse.

This article is therefore an excerpt of an emerging translation process, which involved my activity with the materiality of human and nonhuman bodies in the garden and institutional actors, the discursive dimensions materialized in the interviews, in public documents, in local newspapers and regulations, that is a multispecies, material-discursive, open-ended assemblage.

4. Rome as a Multispecies City

The city of Rome has experienced a withdrawal by of the public administration in the management of green spaces, due to massive cuts to public funds and to a progressive decrease in the number of operative staff. This has been a particularly evident trend in the last decade, even though it could already be observed at least from the second part of the nineties[7]. Because of this lack of management of greenery, combined with other environmental issues (such as for example the increased blurring between urban space and countryside, the lack of trees and weeds cuttery, the lack in trash collection systems) the city is more and more crossed by plants and nonhuman animals, also by those traditionally categorized as wild and spontaneous. In the period of my field-study (2017-

2019) there were many cases of findings of wild boars and foxes reported by local newspapers, which today frequently reach the city centre, while in the past were mainly present in large parks and in the countryside. Plant species are increasingly present in the interstices of urban spaces, multiplying as a result of the reduced maintenance of trees, gardens, and flowerbeds by public institutions.

At the same time, there has been a strong increase in the willingness of citizens-based groups to participate in the management of public green areas, in part, as noted in the interviews I conducted, precisely to compensate the lack of management by the public administration. Self-managed shared urban gardens are a clear example of this tendency, beginning to spread in 2009 (Attili 2013) and reaching about one hundred cases at present (Lupia et al. 2014; 2016; Marzi 2018). The website "Zappata Romana"[8] (Roman Hoeing) published a map of the city where participatory experiences in the management of green areas are reported. The map currently (April 2021) indicates 155 green areas, 58 of which are dedicated to communal gardens, 30 are "spot" gardens (that is, flowerbeds and guerrilla gardening initiatives) and 66 are shared gardens. "Zappata Romana" is a project of the studio UAP (Urbanism, Architecture and Landscape) and being an on-going project the data provided has to be taken with caution but it still illustrates the vitality and the interest that urban agriculture arouses. It is a universe of more or less structured and extremely diverse contexts, ranging from informal groups that perform symbolic actions of guerrilla gardening, to neighbourhood committees that manage flowerbeds, small green areas or small parks[9]. The city is therefore experiencing unusual circumstances, which can, however, also open up to the possibility to fascinatingly investigate human and nonhuman shared agencies, conflicts and alliances in the urban spaces, and to envision more just ways of cohabiting in the city with the nonhuman world.

Figure 3. Tre Fontane garden.

4.1 The Urban Garden "Tre Fontane"

The urban garden "Tre Fontane" was created in 2012 as a shared gardening experience in the southern periphery of Rome, in the VIII Municipality, on an area previously used as an illegal dump. The garden is located within a public urban park, the "Tre Fontane" Park, it covers an area of 2.5 hectares and is managed by a local association of citizens. After a short period of squatting of the area by these citizens, it was allotted to them from the local Municipality. The association that manages the space currently has about 180 members. The garden activists created a self-regulation, which sets out rules for the methods of cultivation and management of the area. In order to obtain the possibility of cultivating a plot of land, it is necessary to become a member of the association. The enrolment must be renewed every year on a voluntary base, through a payment of 10 euros. To maintain the allotment of a plot, it is necessary to also be proactive in the management of common spaces dedicated to conviviality. Otherwise, the association assembly can decide to revoke the allotment the following year. The garden space, not surrounded by any fence, and therefore potentially always accessible, is divided into 150 plots cultivated by groups of 2-5 people each, a common area with fruit trees, tables and gazebos where parties and public initiatives are held, a school garden, a greenhouse and two beekeeping areas. In the garden there are sixteen beehives, located on two hills at the edge of the area, eight on each of the two hills.

5. Following Associations in the Garden Assemblage

Through the use of multispecies assemblage thinking, I will now present two nonhuman figurations (Haraway 1985, 2016) that I encountered in the garden assemblage: the *mellifera* bee and the *Ailanthus altissima*.

5.1 Alien Invasive Plants as Post-anthropocentric Figurations

Within the Eurocentric systems, plants represent otherness par excellence (Breda 2017). In particular, invasive alien plants are categorized by prevailing scientific taxonomies, institutional policies and media narratives as disturbing bodies, as enemies of the natives, to be removed from public spaces. The representations and policies of contrasting invasive species are based on a conception of nature in balance, and frequently mobilize contrasting metaphors taken from the military, xenophobic, nationalist field, so far as to speak of "biological invasions" (Kull et al. 2012). By investigating the symbolic and discursive dimensions clustered around these plants, many studies have opened controversies within biological invasion studies (Atchison and Head 2013; Frawley and

McCalman 2014; Kull and Pamard et al. 2012). The metaphors referring to these plants, metaphors used not only by public institutions, and by newspapers, but also frequently in vernacular and botanical language, are still often clearly anthropocentric. This is the case of terms such as "invasive" and "pest", to be eradicated, to be evicted. These are terms used to refer not only to alien plants, but also to those native plants that freely spread beyond the aesthetic and spatial boundaries imposed by humans' canons and intentionality (Kull and Tassin 2012). It is a categorization that conceives the nonhuman and nature as in a static condition, in equilibrium, a categorization now powerfully contested by postmodern ecology, which has instead shown how unstable ecosystems are, in chaotic transformation, composed of actors in flux. Yet, plants are never out of place (Head et al. 2015). They emerge where they find favourable conditions. If they manage to pop up and survive, it means that they are adapted to the new environment that welcomed them (Head et al. 2014).

Many of these plants were brought to and from colonized and subjected territories in the colonial empires Era, to be exhibited in the botanical gardens, in the large avenues of the cities, in the villas. Still, exhibited as exoticised and objectified bodies, they have spread to the new territories assembling in the arrival ecosystems and showing their agency behind human purposes, so much so as to be called "escaped plants" (Kowarik 2005; Ronse 2011). Moreover, these plants have been currently blacklisted (that is, they should not be planted and the eradication of them is highly incentivised) by the European Commission, or opposed within EU funded environmental projects, as primary enemies of local and native biodiversity. Examples are *Ailanthus altissima, Robinia pseudoacacia* (Black Locust), *Rugosa rose, Ambrosia artemisifolia, Fallopia japonica*[10].

5.2 The Symposium Tree

Among the plants that the scientific taxonomies categorize as invasive and that are present in the garden "Tre Fontane", the occurrence of *Ailanthus altissima* is a very interesting figuration. The *Ailanthus altissima* is also known as the Paradise Tree, as it is named in its lands of origin. Native from China and the Moluccas and widespread throughout eastern Asia, it was introduced in the United States in the eighteenth century, in Europe in 1571 and in Italy in 1760, as an ornamental plant and for cultivation. Its cultivation spread to favour the breeding of the *Ailanthus* silkworm, to replace the silk moth. Later the plant adapted very well in the new territories. It is a fast-growing species that easily adapts to the cold, to water scarcity, to pollution and to all types of soil (Patrick 2014). Precisely for these reasons, it grows very well in urban, ruderal spaces, and in areas of industrial archaeology. *Ailanthus* plants were initially widely used as ornamental plants, especially as trees, in avenues and in urban parks, and also to cover soils and rocky slopes, thanks to their great adaptability,

their superficial root system and their ability to spread numerous lateral shoots (Maxia and Maxia 2003).

Figure 4. The Symposium Tree.

I learnt that *Ailanthus altissima* is categorized as invasive only in July 2019. In fact, I attended a course for garden organizers in the city of Rome, and one of the lessons was held in the "Tre Fontane" garden. During the lesson we were asked to walk around and collect ideas to improve the state of the garden. After an hour of work divided into groups, we gathered under a large tree in the common area, as proposed by the person of the "Tre Fontane" association who was facilitating the lesson that day. Once there, we shared impressions about possible improvements to be made. I was struck by the suggestion of a young man and a young woman, a botanist and a landscape architect, who proposed to work to greatly reduce the presence of *Ailanthus altissima*, precisely because of its infesting "essence". I thus discovered that the large tree around which we were gathered, called by the "Tre Fontane" gardeners the *Ailanthus altissima* "symposium tree" (precisely because, several months before, they took the habit of gathering around this tree for meetings, assemblies or during public initiatives), is categorized by the scientific paradigm as "pest" and "invasive". Yet, in the "Tre Fontane" garden something unexpected happened. This tree has managed to grow so much, assembling with the other actors in the garden, that it is no longer recognized as an invasive and stigmatized species. Instead, it is considered by gardeners as an actor that is part of the garden, so much so that, in fact, when the two attendees addressed the suggestion of eliminating the *Ailanthus* to Francesco (the person of the association who was facilitating the lesson) he was visibly annoyed, and did not accept the recommendation. Even if

aware of scientific categorisations of *Ailanthus* as invasive, gardeners decided to not eradicate it, as they recognise the tree as a member of the garden. This happening shows how these categories are not neutral, immutable essences of the actors to which they refer, but a political product, a hybrid product of the interaction between culture, matter, and power (Dalla Bernardina 2000, 2004; Kull and Tassin 2012).

Moreover, the *Ailanthus* plant is extremely well liked by a nonhuman actor that crosses and co-builds the garden: the *mellifera* bee. In fact, bees are highly attracted by the strong odour of *Ailanthus* flowers, especially within urban environments (Aldrich et al. 2008). Inside the "Tre Fontane" garden, as mentioned above, there are two areas for beekeeping. Claudio, the person who coordinates the beekeeping project, in 2018 analysed the honey produced by the bees housed in the garden hives. The botanical analysis revealed a strong presence of *Ailanthus* flowers. Below I will briefly present the relationship between humans and bees in the garden. The description of this relationship will help to highlight the multiplicity of human and nonhuman actors who cross the garden. I will then devote the next section to an analysis of the interaction between the different actors in the field through a post-anthropocentric material-discursive lens.

5.3 Human-bee Assemblages

The area of the beehives is placed on a rise at the edge of the garden and is marked by a sign with the words "continuous buzz" ("ronza continua" in Italian). The hives are in wood and laminated metal, they are eight, painted in alternating blue and yellow. Following Claudio [a middle age man, which is the coordinator of the garden beekeeping group] I lean on a large wooden bench at the foot of the hill, and Claudio hands me protective clothing. Then he explains me step by step what kind of work we are going to do. He explains that the bees present here belong to the most common species in Italy, which is currently one of the species of nonhuman animals at highest risk of extinction.

Figure 5. Beehives in the garden.

This is due to environmental transformations for which human beings are mainly responsible. In the Italian context, the bee *mellifera ligustica*, the most widespread in the peninsula, is currently at risk of extinction due to the erosion of its habitat and to the spread of a parasite, named *varroa destructor*, which started to circulate in Italy from the 1980s, decimating in a few years the population of wild bees. This parasite is endemic in Asia, where local bees (*apis cerana*) have developed over time a relationship of equilibrium with their host parasite. However, in the 20th century the parasite came into contact with the European bee, following its worldwide marketing for honey production, causing its rapid decimation. In fact, the European bee had no time to adapt to the parasite. While Claudio is describing this historical process, I reflect upon how it clearly shows the environmental violence of capitalist human action. Being aware of the increasingly precarious situation of Italian bees, Claudio proposed starting a beekeeping area in the garden, taking responsibility for a species that has historically been highly endangered by capitalist human action. He explains that some beekeepers treat bees with chemicals to preserve them from the parasites. He is against it, and besides, the use of chemicals in the garden is forbidden. Instead, he treats bees with a mixture of water and thymol, which he sprinkles on them inside the hives. Then the bees, rubbing on each other spread the mixture to the whole hive.

After wearing the upper part of the protection, made of heavy and rough cloth, white, and surmounted by a hood with a metal net at the eye level, we head uphill towards the hives, through an earthy path that crosses a hill covered with "spontaneous" herbs. We carry with us a sack containing the solution, a syringe, and a metal tool with a spout, similar to a watering can. At the top, next to the hives, we climb over the wooden fence that borders the area and wear the hood, with the protective grid that falls before my eyes and blurs my view. The hives are numbered from 1 to 8.

Claudio opens the first apiary. At first glance it seems that around the hives everything is still. Then I try to calm down and begin to notice that there are many bees that fly around the hives buzzing, concentrating mainly at the front (Field note, December 2017).

Figure 6. Beehives in the garden.

I propose that the relation between bees and "Tre Fontane" gardeners can be read as a material-discursive situated alliance. As explained to me by Claudio, who coordinates the project, initially, many gardeners had disliked the idea of implanting beehives. They were afraid of bees, because of their capacity to sting. Actually, after a few years, the project is now very well liked in the garden, and the prejudice against bees has been overcome. Gardeners have started to interact with bees on a daily basis and to even modify the garden in less anthropocentric ways. That is for instance, as I noticed during my fieldwork, they appreciate the presence of the Symposium Tree of *Ailanthus*, also because they have noticed that this plant is particularly appealing to bees. Several of the gardeners now recognize the indispensable value of pollination done by bees, whom they know being at risk of extinction and that have contributed greatly to the garden space improving the quality of vegetable products through pollination. However, while building this alliance, the gardeners enter in conflict with the *varroa* parasite. I suggest that, due to the close, inextricable, connection between human-plants-bees' lives, this relation can be read as a capitalism-varroa-humans-plants-bees multispecies assemblage. My aim is not to provide any universal account, but to relationally translate a part of the story, as experienced in my relation with "Tre Fontane" gardeners and other nonhuman actors of the garden, who affect and are affected in this multiscalar and situated assemblage.

Reading the environmental history that led to the spread of *varroa* (Moore and Kosut 2013b), following the gaze of Claudio, it is clear how much the capitalist model of exploitation of other species has acted, threatening not only the lives of bees but also those of the human species itself. In fact, situated assemblages are inserted in multiscalar capitalist relations, but could become "interesting sites for watching how political economy works" not only for humans (Tsing 2015, 23), and to co-

construct material situated alternatives. Nowadays, according to the perspective of the group that manages the hives of "Tre Fontane" garden (but also of people from other groups that deal with beekeeping in the city, which I have met during the research) bees could no longer survive without human co-action, which, through response-abilities (Haraway 2015), that is through the possibility of being able to engage in mutual responses, creates safer spaces with them. Similarly, humans cannot potentially survive without the collateral pollination carried out by bees. That is, survival always involves others (Tsing 2015). So then, in the garden, a fragile but powerful multispecies assemblage emerges around the bee *mellifera* figuration, through the interaction of different actors, humans and nonhumans. These actors are strictly entangled by continuously creating and re-creating the space, in an indissoluble hybrid that comes to life.

5.4 The Agential Power of Nonhuman Figurations

A material-semiotic analysis shows that interaction between different actors builds an entanglement that continuously modifies the materiality of the garden and the embodied representations that gardeners mobilize around the ailanthus and honey bee figurations. The plant of *Ailanthus altissima*, gives us the opportunity to think how invasive plants could instead be conceptualized and supported within contemporary urban landscapes as witnesses – of European colonialism and environmental injustice perpetrated from colonial history to today (Di Chiro 2007). These are actors with whom to fruitfully reflect on the bio-colonial past in which the eco-social and climatic crisis we are going through has its roots (Ritvo 2018). As this *Ailanthus* plant has demonstrated, hierarchies are the result of relational processes, not ontological substantial statuses (Muller 2015). The tree challenges the dichotomic categorization of the scientific system that would categorize it as a bad invasive plant, to be eliminated. It becomes instead the symbolic centre of the common space for the members of the "Tre Fontane" association. It is precisely the materialisation and continual modification of the space of the garden put in place by this plant, which configures it as a social actor that contests an anthropocentric normative order. Its presence and capacity to co-transform and co-habit the space of the garden, which exceeds human intentionality, clearly question an anthropocentric conceptualisation of urban spaces and allow us to experiment multispecies collective modes of existence within troubled landscapes.

6. Conclusions

With this article my aim was to show the analytical and material power of multispecies assemblages. That is, post-anthropocentric political practices and lens of analysis that allow to creep in the folds of reality, giving emphasis throughout the whole research and analysis process on actors who risked otherwise being made invisible by the use of a fully humanist and anthropocentric gaze. By learning to use a situated gaze that deconstructs the concept of the human as a politically determined power device, the relevance of the nonhuman in the city becomes explicit.

Relying on the multispecies investigations that I have conducted so far, I advocate that, in the immediate future, further research on how a post-anthropocentric city can be imagined and materialized would be relevant. By this term I mean a city co-built and crossable by all those human and nonhuman bodies, who do not fall into the category of Man. Another issue essential for future investigations should be which conflicts could emerge in the co-construction of garden assemblages. For instance, in the bee-human assemblage in the garden "Tre Fontane", gardeners enter in a relation of alliance with bees, conflicting with the *varroa* destructor parasites. Moreover, material-discursive conflicts occur, for example, between gardeners, between some of the gardeners of "Tre Fontane" and other pollinating insects, with other invasive plants (even other *Ailanthus* plants non-recognised by gardeners as welcomed actors), with marginalized human actors. However, as I did in this article, I argue that it is extremely relevant and urgent to make visible micropolitics of mutual care enacted through situated relationalities. The ones described in this text are possible stories that make visible agencies often located at the margins of the social sciences, made significant in the emerging interactions. There may be many other ones. The analysis of entanglements of humans, plants, and other nonhuman actors shows the power and the capacity for action and transformation of the latter, which arise exceeding the boundaries of human normativity and intentionality. This descriptive and analytical attempt turns out to be fundamental in order to be able to build more just multispecies alternatives. In this regard, it becomes clear that agency is always shared and continuously negotiated, as I explored in the entanglements materialised around the *mellifera* bees and the symposium tree of *Ailanthus altissima*.

Notes

[1] These field notes are excerpts of a "multispecies ethnographic work" (Kirksey and Helmreich 2010) that I carried out in Rome as part of my PhD research between 2017 and 2019.

² Following Tsing, in this paper I will understand assemblages as open-ended gatherings that include human and nonhuman actors, which are constantly mutually transforming. This means wondering, in her words, "how sometimes gatherings become happenings" (Tsing 2015, 23).

³ With this term I refer to the material-discursive assemblage of policies and politics implemented in the management of green spaces by public institutions and groups of citizens (vegetal politics on the vegetal) and of political interactions between human and nonhuman actors (with a specific focus on the agency of the vegetal) through which public green spaces are co-constructed in the Roman context (vegetal politics of the vegetal).

⁴ As pointed out by Iovino and Oppermann (2012, 76) body does not only refer to "the human body but to the concrete entanglements (…) in both human and more-than-human realms".

⁵ The Roman urban gardening regulation is available at the following address: https://www.comune.roma.it/web-resources/cms/documents/Delib_N_38_17.07.2015 .pdf

⁶ For more details on the planning activities of urban decorum regulation approved by Roman Municipality in 2018 see Deliberazione Giunta Capitolina number 222, 04 December 2018.

⁷ For detailed information on financial cuts and staff decrease tendencies in the management of green areas and trees in the city see for example: Report 2018, Agenzia per il controllo e la qualità dei servizi pubblici di Roma Capitale; Report 2016, "Il verde pubblico di Roma Capitale, Municipal Statistics Office".

⁸ English version of the website: http://www.zappataromana.net/en.

⁹ See for example the report made by the Council for research in agriculture and analysis of agrarian economy (CREA - Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria) (2015)

¹⁰ Here is a list of alien invasive plants present in the Italian territory, contrasted at the European Union level https://www.lifeasap.eu/index.php/it/specie-aliene-invasive /rilevanzaunionale. An English version of the website, which enlists some of the alien invasive species in Italy, is available at https://www.lifeasap.eu/index.php/en/invasive-alien-species/what-are-they.

More specific actions and restrictions are present at Italian regional level.

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