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# Toward vegetal political ecology: Kyrgyzstan's walnut-fruit forest and the politics of graftability



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#### ABSTRACT

As part of their long-running project to get beyond the nature-culture dualism, political ecologists have increasingly explored the active contributions of nonhumans to environmental politics. Upon decentering humans, however, too often posthumanist political ecologies have recentered humans and animals, indexing the enlarged category of "political actor" to narrowly shared traits like mobility or intentionality. Among other consequences, this tendency in political ecology's posthumanism leaves the political agency of plants largely neglected. Political ecology suffers from this neglect, but the field can benefit from an integration of the insights of vegetal politics, a literature that traces the consequences of plant capabilities in more-than-human geographies. In this article, I model this integration—a vegetal political ecology-by examining human-plant partnerships in post-Soviet Kyrgyzstan's walnut-fruit forest, an ecosystem distinguished by the number of its trees that can be modified by horticultural techniques like grafting. I argue that the forest's "graftability" incrementally undermines two different hierarchies, one typifying people-plant relationships and another that characterizes state-centered regimes of post-Soviet forest governance. Graftability thus allows Kyrgyzstani villagers and trees to act with more autonomy than they otherwise would. This antihierarchical effect is a small biological determinism conferred by the capacities of the graftable tree, and it has political consequences. Vegetal political ecology aims to similarly connect plant performances to their broader political effects; by doing so, it can help political ecologists escape the residual humanism that still characterizes their efforts at posthumanism and better illuminate the political possibilities of partnering with plants.

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#### 1. Introduction

Political ecologists have increasingly looked to posthumanism as an important theoretical resource for getting beyond the nature–culture dualism (Robbins, 2003; Keil, 2005; Braun, 2008). While the resulting posthumanist political ecologies have explored the implications of treating nonhumans as subjects of environmental politics, however, they have largely left plants alone. The clearest articulation of posthumanist political ecology is Sundberg's examination of environmental politics in the U.S.–Mexico borderlands (2011), which highlights nonhuman agency as central to transforming the conduct of humanist political ecology. But although Sundberg demonstrates that boundary enforcement along the Rio Grande involves the active participation of mesquite, rivers, and desert, it is jaguars and ocelots that, by preferring some habitats over others and thus triggering provisions of the Endangered Species Act, most clearly shape political outcomes along

the border. By contrast, although Sundberg identifies a "South Texas Thornscrub collective," she does little to make actors out of the plants that most obviously compose South Texas Thornscrub.

Sundberg is not alone in her animal emphasis: drawing on the vibrancy of the "new animal geography" (Philo, 1995; Wolch and Emel, 1998) and highlighting distinctively animalian traits like mobility and intentionality, other posthumanist political ecologies have investigated animal agency (e.g. Perkins, 2007; Lorimer and Driessen, 2013; Barua, 2014) and animal autonomy (Collard et al., 2015). Meanwhile, even as botanists and philosophers shed new light on plant autonomies (Garzón and Keijzer, 2011; Marder, 2012; Trewavas, 2014), political ecologists still treat plants primarily as aspects of the landscape against which other human and nonhuman actors move. Mesquites are not only the objects of feline preference, forests are not only the objects of state governance and scientific research (Vandergeest and Peluso, 2011), and chestnut trees are not only the objects of conservation biopolitics (Biermann and Mansfield, 2014); by failing to theorize plants as always also political subjects, political ecologists ensure that their posthumanist turn is a limited and overly-animalian one.

Notwithstanding Robbins's observation that "Trees are political agents" (2007a, p. 50), political ecologists have rarely written as if that were the case (exceptions include Page, 2003; Robbins, 2007b; Biermann, 2014; Weisser, 2015).

Political ecologists are not the only geographers guilty of what has been called "plant blindness" (Wandersee and Schussler, 1999). Head et al. diagnose the same problem in the broader corpus of posthumanist geographies, and propose a "vegetal politics" as remedy (2014). If posthumanist geographies have too often decentered humans only to recenter humans and animals, they argue, then vegetal politics describes a fuller integration of human-plant relations into the multispecies relational ontology that more-than-human geographies trace. Combining insights from botany and horticulture with more familiarly geographical material, analysts of vegetal politics recast plants not as background figures but as actors in their own right (Head et al., 2015). Doody et al., for example, theorize weediness, often understood as a human construct, as emergent instead from the joint performances of both people and plants (2014). Pitt, for her part, tracks the effects of expertise on a community garden, but locates that expertise in both human and plant bodies (2015). In accounts like these, analyzing vegetal politics means articulating how 'plan tiness'—the set of characteristics and capacities specific to plants shapes political landscapes and transforms political identities (Head et al., 2012). These transformations are different than those posthumanist political ecology has so far undertaken; plants take political ecology further from its humanist roots than do the animals that drive existing posthumanist treatments. If posthumanist political ecology has suffered from plant blindness, vegetal politics seems to offer a corrective.

It is not only their own plant blindness, however, that has kept political ecologists from seeing the consequences of plantiness. Indeed, given the attention that political ecologists have lavished on plant materiality under different theoretical frameworks (e.g. Schroeder, 1993; Rocheleau and Ross, 1995; Zimmerer, 2003; Prudham, 2005; Kosek, 2006), perhaps a better explanation for the gap between political ecology and vegetal politics is the latter's theorization of politics. Three aspects of this theorization stand out. First, vegetal politics has defined its politics to suit the workings of plants, most of which operate slowly and subtly, if not invisibly. In order to lend voice to these "small agencies" (Bennett, 2010, p. 94), scholars of vegetal politics have selected quiet settings, where power relations are muted and louder actors-who occupy the attention of political ecologists-are excluded. Second, and relatedly, the plants examined by many studies live in private gardens and navigate fairly gentle political economic terrain (e.g. Hitchings, 2003; Power, 2005; Doody et al., 2014; Pitt, 2015). Fewer studies in vegetal politics consider political ecology's favored spaces of resource production, economic development, and environmental conservation, where plants contend with stronger flows of power (but see Richardson-Ngwenya, 2012; Peltola and Tuomisaari, 2015). A final contrast is scalar: the literature of vegetal politics often finds the consequences of plantiness in the mutual "learning to be affected" that close contact across human-plant difference can initiate (Atchison and Head, 2013; Brice, 2014). While broader connections are sometimes explored (e.g. Head et al., 2012), scholars highlight the intimate encounter of bodies, a focus not foreign to political ecology but typically complemented by attention to cross-scale connections and further-reaching chains of explanation (Blaikie and Brookfield, 1987; Turner, 1999; Zimmerer and Bassett, 2003). If political ecologists have been blind to the agential possibilities of plants, then, scholars of vegetal politics have been myopic in neglecting plantiness's broader political ramifications. Given these paired problems of vision, the field between vegetal politics and political ecology remains mostly uncultivated.

In this article I colonize that field, bringing vegetal politics and political ecology together to produce what might be called vegetal political ecology. By this I mean an analysis that shows the impact of plantiness on human-plant encounters, like vegetal politics does, but that further links this impact to resource politics and other broader environmental contestations, like political ecology does. In many cases, as the previous paragraph implies, plantiness resonates most clearly in small spaces, and with small (but real!) effects. With creativity, however, vegetal political ecologists can find cases in which plant agency has weightier consequences on bigger stages. Here, I explore how resource politics in southern Kyrgyzstan's walnut-fruit forest are shaped by the distinctive capacity of some plants to enter into horticultural partnerships with people, specifically through grafting. Grafting is a standard element of the global horticultural toolkit, one of the most important methods of cloning plants by vegetative propagation. The technique involves implanting part of the body of one plant—the scion-into the body of another-the rootstock-and inducing the two to grow together. In the walnut-fruit forest, grafting allows the construction of forest trees bearing high-quality fruit, with domestic scions and wild rootstocks sharing composite bodies. Only some trees have the "graftability" that allows these manipulations: adult walnuts are effectively ungraftable, while forest populations of almond, apple, apricot, pear, pistachio, and plum are more easily grafted. Their graftability is a facet of plantiness, dependent in particular on the indeterminate and decentralized nature of plant growth (Marder, 2013, p. 65). Here, I focus on two domains which together constitute a politics of graftability in the walnut-fruit forest: first, a bodily politics of grafter and tree, and second, a broader resource politics of the graftable forest. This structure mirrors the theoretical gap I have identified: the first domain rehearses established approaches in vegetal politics, while the second models its extension into vegetal political ecology. In each of these two domains, I argue, graftability undermines the hierarchy that otherwise defines them, and contributes to more equitable environmental politics.

My argument for the anti-hierarchical effects of graftability is based on thirteen months of fieldwork, mostly ethnographic, in southern Kyrgyzstan's walnut-fruit forest belt in 2011 and 2012 (see Fig. 1). The walnut-fruit forest is unusual among temperate forests for the fruitfulness of its trees, which include many of the species that grow in orchards around the temperate world. Interested in how the forest's fruitfulness affects local resource politics, I conducted about 120 semistructured interviews with village residents, state foresters, development professionals, forest scientists, and conservationists. I engaged in participant observation, spending most of my time in two forest villages where lives of humans and trees are particularly closely intertwined. There, I ended up focusing especially on those residents who graft forest trees; I call them "village grafters," and more than a dozen figured in my fieldwork. Ethnography is a central method in both political ecology (Moore, 1993) and vegetal politics (Head et al., 2014), and its extension into multispecies settings (Kirksey and Helmreich, 2010; Ogden et al., 2013) makes it a strong starting point for vegetal political ecology (see also Pitt, 2015). Other methods can help contextualize ethnographic findings, however, and I also conducted a household survey in the two study villages<sup>1</sup> and mapped grafted trees in three forest parcels of varying land use history. Taken together, these data suggest that village grafters enter into a politics that, because of the capacities of the plants who also participate, tends toward the non-hierarchical, both in how bodies relate

<sup>&</sup>lt;sup>1</sup> The survey sampled 156 households, roughly half of these from each of the two villages. All sampled households were randomly selected from one neighborhood in each village, an attempt to strike a balance between casting a wide enough net and allowing me and my two field assistants to conduct the surveys efficiently.

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