Village *Fengshui* Forests of Southern China: Culture, History, and Conservation Status

Chris Coggins, Joelle Chevrier, Maeve Dwyer, Lindsey Longway, Michael Xu, Peter Tiso, Zhen Li

Abstract: The post-reform revival of *fengshui* has revitalized village management of "*fengshui* forests" (*fengshuilin*). This study examines the cosmological principles, landscape ecology, conservation status, and floristic diversity of forest patches comprising critical biological refugia in China's subtropical broadleaved forest region. From 1949-79, *fengshui* was prohibited by the state, but many lineage villages continued to protect *fengshuilin* through nontraditional means. Village *fengshuilin* still lack official state recognition, which impedes systematic research and conservation planning. We assess the political ecology of *fengshui* practice, *fengshuilin* management, enforcement of harvesting bans, and tree species selection in seventeen villages associated with over forty forest patches. There is little species selection on the basis of utility, thus *fengshuilin* contain diverse taxonomic assemblages resembling patches of old growth forest. Strong village management traditions and a general lack of state intervention suggest robust local institutional capacity for maintaining and enhancing forest diversity and protecting unique indigenous landscape ecologies.

Keywords cosmology; vitalism; fengshui forests; biodiversity conservation; subtropical broadleaved evergreen forests.

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INTRODUCTION

This research focuses on village *fengshui* forests, known as *fēngshǔilín* (风水林), which are common but understudied features in the rural landscapes of southern and central China's subtropical broadleaved evergreen forest region and southern China's tropical monsoonal rainforest region. Previous studies that recognize these forests as part of the Han Chinese rural landscape include those of E.N. Anderson and Marja Anderson, G.W. Lovelace, Wei Fan, Nicholas K. Menzies, and Youn Yeo-Chang et al.[1] More detailed field studies include those of Zhuang Xue Ying and Richard T. Corlett, Chris Coggins, Thomas C.Y. Chan, and H. Liang et al.[2] All of the latter studies focus mostly on Hakka[3] villages, and with the exception of Coggins, all are limited to Hong Kong and the Pearl River Delta region of southern Guangdong. While it has long been established that Buddhist and Daoist temples in all regions of China have provided refugia for trees, understory plants, and wildlife,[4] much less is known about forests protected by lineage villages across many generations through local institutional practices and how such practices may have been shaped by the state. This research combines natural and social scientific methods in order, first, to reconstruct the history and map the geographical extent of *fengshui* forests and second,

to ascertain their significance for the preservation of biological diversity and as part of an emerging discourse on nature conservation in China.

Fieldwork conducted in the summer of 2011 was the first phase of a multiyear investigation of village *fengshuilin* in ten to fourteen provinces. As such, it establishes a baseline for methodology, critical questions, and preliminary hypotheses regarding the cosmological concepts, discursive formations, and local resource management strategies that have sustained *fengshuilin* preservation as part of a suite of southern Chinese ethno-ecological practices over the *longue durée*. In ethnographic terms, this requires an understanding of the durability of vitalism in Chinese vernacular expression and everyday life, particularly as it animates the cosmo-ecology of *fengshui* landscapes. In historical terms, we examine breaks, continuities, and reconfigurations in the relationship between political power and local resource management from the pre-communist period (before 1949), through the era of authoritarian Maoism (1949-79), and into the post-reform period (1979-present). In the context of the last period, our long-term objectives are three-fold. First, we are analyzing the degree to which *fengshuilin* management practices have contributed to biological diversity and habitat heterogeneity in southern and central China. Second, we are examining the roles of local, regional, and national state institutions in recognizing and protecting *fengshuilin*, Third, we are investigating the relationship between *fengshuilin* management traditions and emerging conceptions of place, nature, and environmentalism in the popular imagination.

This paper adopts a political ecology perspective, focusing on the political, economic, and social factors that relate to conceptions of the environment and processes of ecological change.[5] Given the fact that *fengshui* has long been a matter of ultimate cosmological concern for corporate lineage villages[6] across southern China, many of which were once largely self-governed, we argue first that village *fengshui* is a form of ecological vitalism—a system premised on the existence of supernatural forces connecting the living and non-living elements of the landscape and felt to be essential for the survival of the lineage as a viable polity; second, that *fengshui* is simultaneously a set of conceptual bases and performative modes of practical action enabling collective management of plant resources (forests and croplands) and hydrological resources (streams, overland flow, and groundwater); and third, that *fengshui* forests have long been preserved for their ecological and hydrological functions rather than conserved for the economic utility of certain harvestable species, and for this reason, these forests and small groves exhibit high levels of species diversity. A final point of our work is that despite radically different official discourses on nature and culture before 1949, during the Maoist period, and in the post-reform period of economic and social liberalization, the *fengshui* forests that have endured can be understood as *actants*.[7] In specific terms, that means that the forests themselves have had, and will continue to have, significant influence on the humans who must reckon with their multifaceted presence as ancient biological, cultural, spiritual, and aesthetic features in the landscapes of southern China.

FENGSHUI AND THE POLITICAL ECOLOGY OF FOREST CONSERVATION

China is widely considered a "forest poor" country, with per capita forest coverage that is one-fifth the world average, and per capita standing forest stock that is one-eighth the world average.[8] Most of China's forest coverage was lost many centuries in the past, and by 1949 forest coverage was roughly 8.6 percent.[9] Due to state-led reforestation efforts undertaken since then, including the Sloping Lands Conversion Project (SLCP) (2001-2010),[10] China now has a total forest coverage of over 175 million hectares, or nearly 20 percent of the total

land area.[11] However, at least one-third of this consists of biologically impoverished conifer plantations, most of which are managed by the state, and only about 12 percent of the land area has vestiges of the original tropical and subtropical broadleaved evergreen forests of southern China, the mixed deciduous-broadleaved evergreen forests of central China, and the deciduous and coniferous forests of the north and northeast (Figure 1). In terms of the number of tree species, China's subtropical broadleaved evergreen forest and mixed deciduous-broadleaved evergreen forests are the most biologically diverse of their kind in the world.[12] These forest regions have also long been noted for their biological affinity with the forests of Eastern North America, the result of a disjunct distribution following the breakup of the Laurasian landmass at the end of Cretaceous Period.[13]

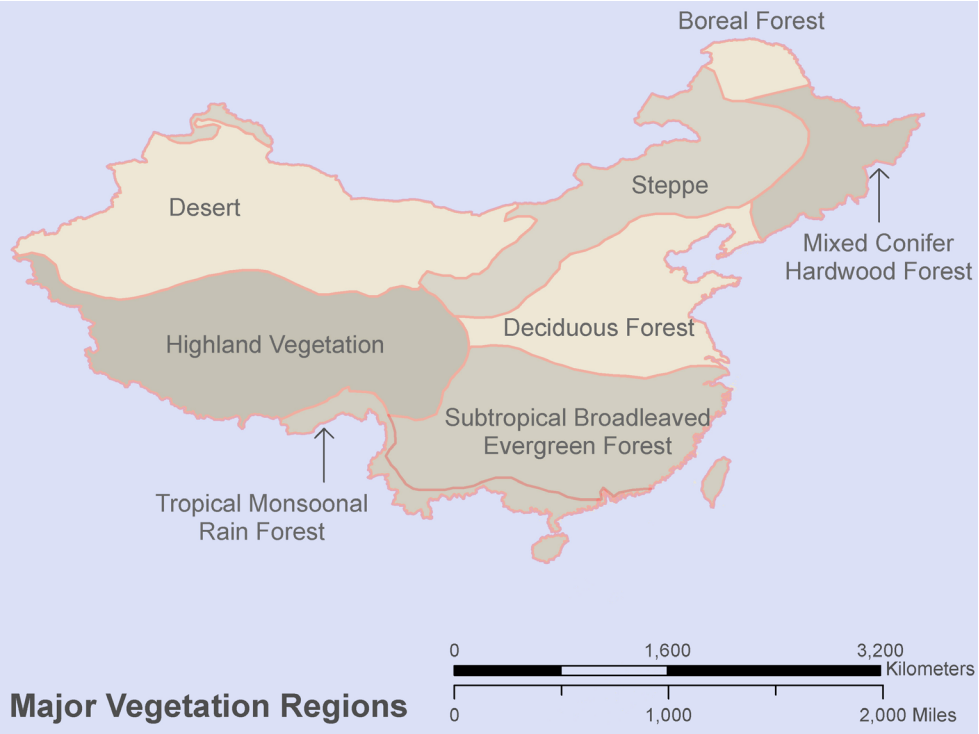

Figure 1. China's subtropical broadleaved evergreen forests and mixed deciduous broadleaved evergreen forests are the most floristically diverse of their kind in the world.

Given the relative scarcity of even successional remnants of China's primeval forests, preservation of existing mature and late-successional forest patches is critical. In this regard, we must note the complex political ecological relations between the state and local people, which are manifested in a variety of environment and development projects and associated conflicts. While the SLCP is a national program geared toward forest and watershed conservation and is a form of governmentality that nurtures the production of environmental subjects and "environmentality,"[14] the local state—at the level of the county, township, and even village governments—is deeply involved in brokering commercial development schemes that appropriate village crop and forest lands, often to the benefit of officials and private corporations. The December 2011 "Wukan Revolt," in the eponymous village in southern Guangdong, is arguably exceptional only because it became a high-profile international spectacle. As a grassroots protest against allegedly illegal sales of long-term leases on farmland and forests to private developers for the construction of industrial parks and apartment complexes, the case is emblematic of an enormous wave of land tenure conflicts across China, with estimates of "mass incidents" ranging in number from an official figure of 10,000 since the mid-1990s, to a Chinese sociologist's estimate of 180,000 in 2010 alone.[15] As Liu Xiaobo notes, "In more than twenty years of urban modernization and across a 'great

leap forward' in real estate values, officials wielding the power of the state and invoking government ownership of land have colluded with businessmen all over the country to carry out a kind of Chinese Enclosure Movement."[16] Citing a series of "manifestos" written by Chinese farmers' organizations that demand what Liu characterizes as rural land privatization, he states that "At last farmers are speaking for themselves, loud and clear, and a silent nation is hearing a cry from deep inside its heartland."[17]

While it is beyond the scope of this article to examine the likely mechanisms and possible ramifications of full-scale land privatization in China's countryside, an historical political ecology of *fengshuilin* management requires an account of how *fengshui* principles and practices have long served to constitute lineage villages in cosmological terms that are inextricable from both the habitus of everyday socio-ecological practices and the political struggles and clashes that define the modern history of China's countryside. We begin with a review of key terms.

Fengshui, or "wind" (*fēng*, 風) (and) "water" (*shuǐ*, 水), is a colloquial term for the ancient Chinese way of conceptualizing and regulating the flow of vital forces or substances (known as *qì*, 氣) through the landscape. *Fengshui* theory and practice seek to optimize the locations and site conditions of houses, temples, tombs, and settlements in order to harmonize the human realm with the natural and supernatural forces and agencies associated with nature and the cosmos (*tiān*,天). Formal terms for *fengshui* include "*dìlǐ*" (地理, earth principles)—the modern word for "geography"—and "*kānyú*" (堪輿), the canopy of heaven and the chariot of the earth, a term emphasizing the cosmic relationship between heaven and earth. The symbolic systems found in *fengshui* are based in correlative cosmology, and canonical *fengshui* theory can be traced back to the early Han dynasty (202 BCE – 89 CE), when it was already deployed in the construction of cities and palaces.[18] Parallel with this "great" tradition are myriad rural folk practices that have both drawn from and informed *fengshui* doctrines passed down through texts. These have roots in both Han and non-Han cultures of southern and southwestern China, where geopiety (religious regard for terrestrial features) and animism are still common.[19] The "great tradition-little tradition" dichotomy provides little in the way of an accurate history of core-periphery relations, and a scholarly consensus on the place of *fengshui* and *fengshui* forests in state-local relations during premodern times has yet to emerge. Research on this topic is scant but includes promising leads.

On the one hand, we have a view of rural isolation and village autarky,[20] on the other hand, in Late Imperial China there were state efforts to promote the lineage village model as a precondition for the rights of land ownership and incorporation in the administrative system.[21] Working in Hong Kong's New Territories, Eugene and Marja Anderson were among the first cultural ecologists to undertake a study of village *fengshui*. They note that in rural regions of southern China before 1949 "state control was almost nonexistent; anarchy prevailed, order being preserved by the lineages and other associations…anarchy in peasant villages meant not chaos and strife, but a dependence on mutual-aid and kinship ties to preserve order and efficiency."[22] Showing how social relations were largely mediated by the "unique science of site planning," that is *fengshui*, they add that "The perfect plan is roughly as follows: the house, village or grave must be situated on a slope or raised place. Projecting spurs should partially encircle it. Trees and plants should grow lushly, and in particular there should be a grove of large trees just behind (upslope from) the village."[23] In these and other passages, the Andersons stress the depth of interconnection between landscape management, social order, and local governance. Careful to avoid reductive functionalist assumptions about the "ecological purposes" of *fengshui*, they treat it more as a set of cogni-

tive models and performative practices in the (re)creation of a harmonious cosmos. In this view, it was critical for communities that were often politically and economically marginal to draw upon magico-religious conceptions of the environment in a system geared toward ecologically adaptive site planning and landscape management. While this view is compelling, it is important to keep in mind the possibility that the state not only promoted lineage villages and the keeping of ancestral records as preconditions for corporate membership, but also that there is evidence for imperial involvement in *fengshui* forest management as early as the Song Dynasty (960-1279).[24]

While details of premodern state-local relationships involving *fengshuilin* management remain unclear, perhaps it is not surprising that in some of his earliest writings on revolution in the countryside, Mao Zedong targeted lineage organizations and *fengshui* as major structural (and "super-structural") barriers to modern progress, progress that was to be based on the inculcation of class consciousness and a sense of historic and political agency among the peasantry. Early in 1927, the year that the Nationalists (*Guomindang*) largely destroyed the Chinese Communist Party in Shanghai, and while Mao was still concurrently a member of the *Guomindang* and the Communist Party, he completed the now classic "Report on an Investigation of the Hunan Peasant Movement." In this treatise, based on almost two years of experience organizing peasant associations in rural Hunan, Mao wrote that in the countryside men were subject to three repressive systems of authority: the state and formal political authority; the clan system, including central and branch ancestral temples; and the "theocratic authority" of gods and spirits. Women were subject to these and the additional system of patriarchy, embodied in the form of "the authority of the husband."[25] Under such conditions, landlords and lineage temple heads had to be overthrown, idols smashed, temples demolished or converted to schools, and *fengshui* abandoned as superstition.

> In the countryside I, too, agitated among the peasants for abolishing superstitions. What I said was: "One who believes in the Eight Characters (*bāguà*) hopes for good luck; one who believes in geomancy [*fengshui*] hopes for the beneficial influence of their burial grounds [*xìn fēngshuǐ wàng fénshān guàn qì*]. This year the local bullies, bad gentry, and corrupt officials all collapsed within a few months. Is it possible that till a few months ago they were all in good luck and all under the beneficial influence of their burial grounds, while in the last few months they have all of a sudden been in bad luck and their burial grounds all ceased to exert any beneficial influence on them?"[26]

After 1949, land redistribution was carried out across China, and during the Great Leap Forward (1958-61), croplands, bamboo forests, and *fengshui* forests were usually designated as collective lands (*jítǐde tǔdì*) and only productive forests and other lands at greater distance from the village were designated as national lands (*guóyǒude tǔdì*). Thus, in spite of the prohibition of overt practices and public discourse on *fengshui*, *fengshuilin* were in many case as effectively protected as before, and this was a socio-ecological legacy of centuries of local management institutions. As villagers in southwest Fujian explained, many *fengshuilin* were too remote to be useful for industrial purposes, even during the Backyard Iron Smelting Movement (*Dàliàn Gāngtiě*), and when *fengshuilin* were threatened by state projects, villagers often defended them on practical grounds for their role in protecting the village from wind and erosion, or in providing a shady respite from field labor.[27] Thus, during the numerous political campaigns that swept through the countryside between 1949 and 1979, *fengshuilin* normally fared much better than the ancestral temples (*cítáng*), earthgod shrines

(*tǔdìgōng*, *gōngwáng*), and small Daoist and Buddhist shrines (*ānmiào*) with which the forests were (and are once more today) closely associated (see below).

PRELIMINARY FIELD RESEARCH

Our field research in the summer of 2011 focused on *fengshuilin* in Hong Kong and the provinces of Guangdong, Fujian, and Jiangxi. Most of the field surveys were conducted in the Meihuashan, Jinggangshan, and Chebaling (national-level) nature reserves (Figure 2). This study analyzes the relationship between *fengshui* cosmology, indigenous landscape ecology, and the structural and functional characteristics of *fengshuilin* as forest patches vital to a belief system that is at once social, ecological, and spiritual. We approach this subject emically, that is in terms of the logic of *fengshui* theories codified in texts and passed down in everyday practice, and etically, in terms of the ecological services and social functions that help define *fengshuilin* in natural and social scientific terms. Village-based research included indoor, semiformal structured interviews with individuals or small groups. This was followed by less formal, less structured interviews and discussions and by outdoor research in *fengshui* forests that involved discussions with villagers and forest assays. The latter included species identification and measurement of diameter at breast height (dbh) of the five largest trees in each forest patch and the identification of all trees over 20 cm dbh in 10 x 10 m quadrats in selected forest patches. All interactions were conducted in Mandarin and recorded on survey forms, digital videotape, digital audiotape, and with digital photography. GPS data were recorded and will be incorporated into a geographic information system after more field data have been collected.

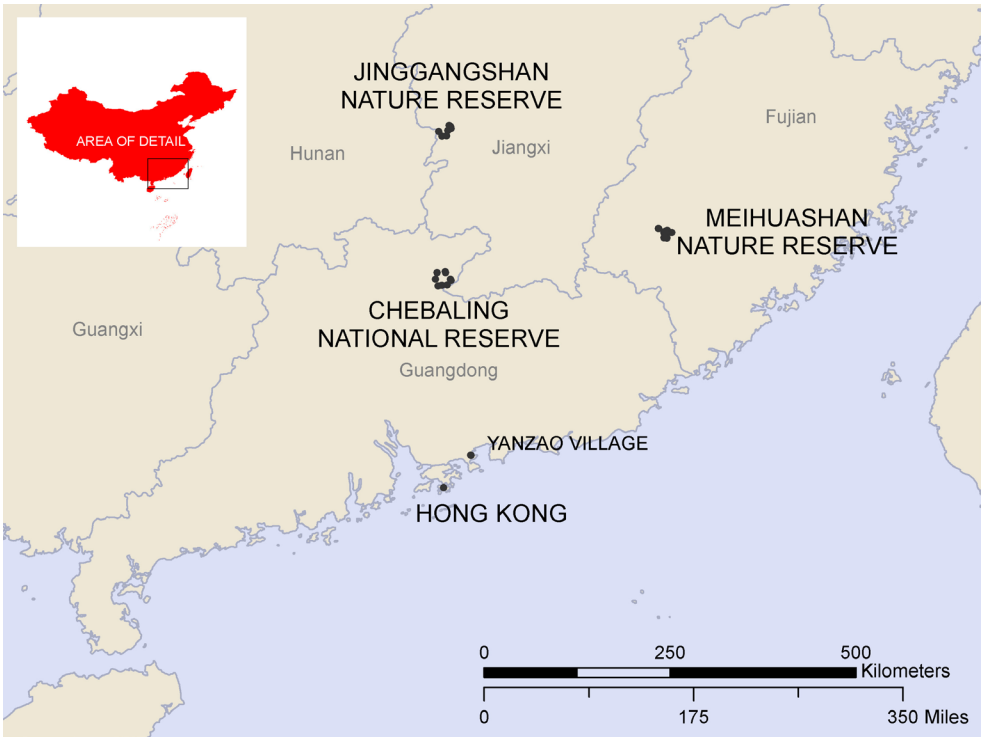

Figure 2. In the summer of 2011, preliminary field work was conducted in Hong Kong; more systematic work was carried out in the Meihuashan Nature Reserve in Fujian, the Jinggangshan Nature Reserve, in Jiangxi, and in (and around) the Chebaling Nature Reserve, in Guangdong. Research was also conducted in one village, Yanzao, on the coast in Shenzhen.

PRELIMINARY FINDINGS

Settlement Data

Of the seventeen villages where full surveys were conducted, eleven (65 percent) were located within nature reserves; two additional villages had *fengshui* forests designated as protected areas by the state (at the national level in Congtou, Fujian, and at the township level in Yanzao, Guangdong) (Table 1). Fifteen (88 percent) of the villages were inhabited by Hakka. Estimated ages of the villages ranged from 59 to 1,000 years, with an average age of 470 years. The reported number of generations *in situ* ranged from 6 to 30, with an average of 18 generations, and according to these estimates, there is an average of 26 years per generation. Primary economic activities in all of the villages consist of a combination of extra-local employment associated with high rates of labor outmigration by young and middle-aged adults (up to 70-80 percent of adult laborers in some villages), and economic land uses associated with agriculture and forestry. Meihuashan villages devoted nearly all productive mountain slopes to the propagation of mao bamboo (*Phyllostachys pubescens*) in pure stands. These villages devote nearly all agricultural lands of the valleys and lower slopes to commercial vegetable production. Jinggangshan villages continue to grow rice for local consumption and to produce some timber in Chinese fir (*Cunninghamia lanceolata*) plantations, and Chebaling villages had a similar land use profile.

VILLAGE SETTLEMENT DATA

Variables	Findings
Protected Area Status (17 Villages)	**11 (65%) in Nature Reserves; 2 Designated as Protected Areas (1 National-level, 1 Township-level)**
Ethnicity	**15 Hakka Villages; 1 Yongxin Gan; 1 Yao**
Average Age of Villages (Range)	**470 Years (59-1,000 Years)**
Average Generations *In Situ* (Range; Years/ Generation)	**18 (6-30; 26)**
Primary Economic Activities	**70-80% Labor Out-migration of Young Adults; Fujian – Bamboo & Commercial Vegetable Production; Jiangxi and Guangdong – Commercial Agriculture, Timber, Local and Extra-Local Labor**

Ecological Data on Forest Patches—Tree Species Selection

All of the forests surveyed were either broadleaf or mixed. Identification and measurement of the five largest trees in each forest patch resulted in a total of 56 individual broadleaved trees and 29 individual needle-leaved trees (Table 2). With only one exception, the largest individuals in mixed stands were needleleaved trees, most commonly *Cryptomeria fortunei* (Chinese cedar), followed by *Taxus chinensis* (Chinese Yew), *Tsuga longibracteata* (or *Nothotsuga longibracteata*, Chinese hemlock), and *Cunninghamia lanceolata* (Chinese fir). Informants in Meihuashan, where needleleaved trees are a much more common forest component, believe that *Cryptomeria*, *Taxus*, and *Cunninghamia* in pure and mixed stands were planted by village ancestors. Broadleaved species were the predominant element in both mixed and broadleaved forests, and are believed to have grown without human selection, propagation, or direct management. Of the largest trees measured, there were 25 species of broadleaved and four species of needleleaved trees represented. None of the broadleaved trees were described by villagers as having particular economic value, thus they were not planted or selectively protected for utilitarian purposes. From this it is clear that the broadleaved and mixed *fengshui* forests have been managed for what are now deemed "ecosystem services" rather than as sources of timber or non-timber resources. As a result

they are far more diverse and structurally complex than the monocultural tree plantations that make up the majority of reforested areas throughout China. In order to understand the species composition and raison d'ètre of the *fengshuilin*, we must consider the broader purposes of village *fengshui*.

ECOLOGICAL DATA ON FOREST PATCHES

Variables	Findings
Percentage Broadleaf/Mixed/Needleleaf	**53% / 47% / 0%**
Percentage Largest Trees Broadleaf/Needleleaf (n=85)	**65.9% / 34.1%**
Largest trees in mixed stands	**Conifers (1 exception): Chinese cedar (*Cryptomeria fortunei*), Chinese yew (*Taxus chinensis*), Chinese hemlock (*Tsuga longibracteata*), Chinese fir (*Cunninghamia lanceolata*)**
Total number of BL species/genera; NL species/genera (of 5 largest trees in stand)	**25/15; 5/5**
Average dbh of all trees measured (5 largest)	**85.2 cm**
BL genera represented	**Castanopsis (6 species), Schima (2 species), Altingia, Liquidambar, Celtis, Sapindus, Cinnamomum, Heretiara, Ficus, Phoebe, Uvaria, Michelia, Lithocarpus, Cyclobalanopsis, Bretschneidera**

Fengshui —Vitalist Cosmology and Rural Landscape Ecology: The Lineage Village as Wind-Water Polity

Interviews with *fengshui* masters (*fēngshuǐ xiānshēng*) and other villagers revealed that *fengshuilin* are essential components of a vitalist cosmology premised upon managing village environs to optimize the spirit and vigor of landscapes and their living and deceased inhabitants. Recognizing the lack of a suitable term in English to describe forces and substances that infuse and animate both the organic life forms and the non-living components of a landscape, we use vitalism as a proxy term. Modern scientific cosmology rejects the notion of "life force" and the possibility of a vital energy or matter that animates and unites humans (both living and dead) and non-human elements of the landscape. As Latour explains, "the modern constitution" insists upon a separation of humans and "culture" from nonhumans and "nature," which is maintained through practices of "purification."[28] This discursive formation can make it difficult, if not impossible, to conceive of other ways of knowing and being in the world, although we note some recent and vigorous efforts among western social theorists and philosophers to conceive of more vital relationships between humans and non-humans.[29]

As a vitalist cosmology, *fengshui* provides guidelines for the siting and improvement of *yángzhái* (陽宅), houses of the living, and *yīnzhái* (陰宅), tombs, or "houses" of the dead. *Qì* (氣), the primary substance or material of ultimate concern, flows through *lóngmài* (龍脈), or shallow subterranean "dragon veins". It takes the form of *shāqì* (殺氣)—*qi* that kills or weakens the landscape and its denizens—or *wàngqì* (旺氣)—*qi* that promotes the spirit (*shén*, 神), prosperity, and health of all beings and elements within the village landscape. Of particular significance for our purposes is the fact that the flow of *qi* is mediated by wind, water, sunlight, terrain, and vegetation. For instance, dangerous *qi* is conducted within *shāfēng* (殺風, "killing wind") and *shāshuǐ* (殺水, "killing water"), which are associated with the destruction caused by high velocity winds and high velocity overland flow of water, respectively. *Fengshuilin* ameliorate the effects of *shafeng* and *shashui* because the flow of *qi* underground is fairly shallow and is thus affected by sunlight, which adds *yang* (陽), or positive *qi*. Thus a given site's exposure to sunlight is generally salutary as long as the area in

question is not exposed to the effects of deadly winds and waters.[30]

For these reasons, *fengshuilin* are situated immediately behind and upslope from the village (Figures 3 and 4), on what is called the *zhǔshān* (主山), or master (also "host" or "owner") mountain.[31] Ideally the village is located at (or in) the "lair" (*xué*, 穴), which rests on a slope above the floodplain croplands, a site where *yin* and *yang* energies are believed to be (or need to be) in balance. Since China is in the northern hemisphere, it is considered best to "sit in the north facing south" (坐北朝南 *zuòběi cháonán*); in other words, villages and individual houses should "face" the sun, which is in the southern sky for the duration of the year. Direct sunlight promotes the growth of rice crops, which are ideally located in a broad floodplain south of the village, and the sun's rays provide warmth for the village in winter at the same time that winds from the north are blocked by mountains "behind" the village. Figure 3 thus denotes an ideal location for a house or village, using the analogue of the human body, with the *xue* fronted by a *míngtáng* (明堂) or ("bright") hall reflecting celestial *qi* from the sun into the *xue*. The fertile and generative *xue* is surrounded and protected by the master mountain in the north, and spurs or ridges to the west (the white tiger, *báihǔ*, 白虎) and to the east (the azure dragon, *qīnglóng*, 青龍). Higher mountains extending farther north from the master mountain include the parent mountain, grandparent mountain, and Kunlun mountain, a series that both partially replicates the lineage structure and connects the village to the sacred originary point of gods in the Daoist pantheon.[32] In fact, the Gonghe village ancestral record (*zǔpǔ*) describes the dendritic pattern of *qi* flow into the village as having its origin in the Kunlun Mountains of the far west.[33]

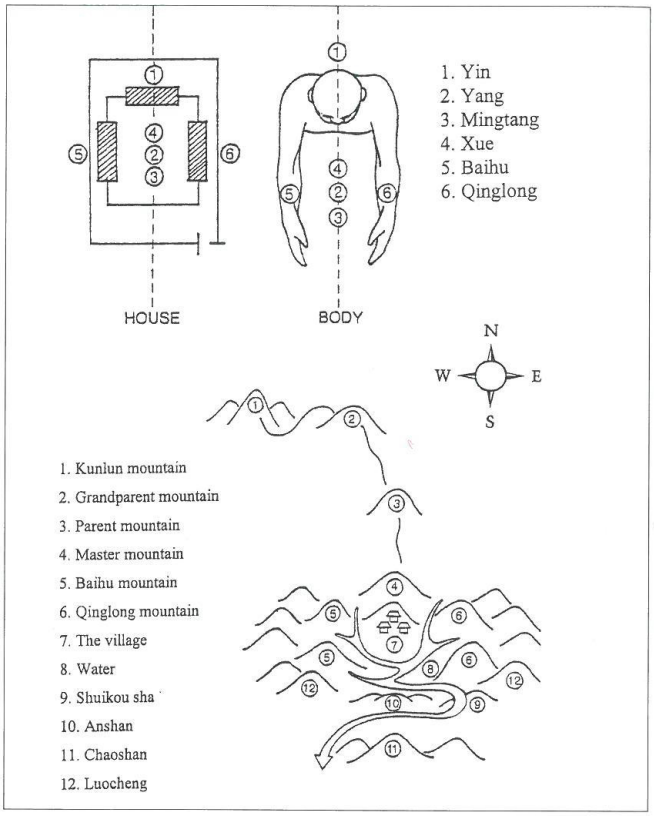

Figure 3. The structural configuration of *fengshui* sites can be likened to a human body. Shown here are ideal house sites and village sites.

This general crescent-shaped configuration is replicated at all scales of the built environment, from tombs, to shrines, to temples, to the villages as a whole (Figures 4-7).

Our research in Fujian yielded the most complex systems of *fengshuilin* siting within the three-province set of field sites (Figure 4). In short, there are four types of *fengshuilin* according to the local typology, and while the first was observed in all study areas, the other three were only observed in Fujian. The four types are: 1) *Houlongshan fengshuilin* (後龍山風水林), which are immediately behind and upslope from the village, protecting it from erosion caused by overland flow, helping ensure a year-round supply of ground and surface water, and protecting the watersheds of the incoming streams which comprise the primary water supply for crop irrigation and everyday use (Figures 5 and 8). All of the

Figure 4. *Fengshuilin* types are associated with specific locations relative to the settlement.

houlongshan fengshuilin observed consisted of broadleaved forests or predominantly broadleaved forests. 2) *Shan'ao fengshuilin* (山凹風水林), which block winds that enter the valley through wind gaps (*shān'āo* 山凹). In Fujian these consist almost exclusively of Chinese cedars (*liǔshān*, 柳杉, *Cryptomeria fortunei*) growing in saddles and along the streams that descend from them, and these trees are said to have been planted by village ancestors. 3) *Shuǐtóu* (水頭) or *cūntóu* (村頭) *fengshuilin*, which consist of Chinese cedar or broadleaved forests that serve some of the same purposes as the aforementioned forests. 4) *Cūnkǒu/wěi* or *shuǐkǒu/wěi* (村口/尾 or 水口/尾) forests, which are typically broadleaved forests that

Figure 5. Ancestral temple (*citang*) in front of broadleaved evergreen *fengshuilin* in Gonghe Village, Meihuashan Nature Reserve, Fujian.

perform many of the same functions, but are unique in that they are supposed to "hold in" the village's wealth and prevent it from flowing away with the water or wind that exit the village space down-valley.

Figure 6. Earthgod shrine (*tudigong*) in front of Chinese cedar (*Cryptomeria fortunei*) *fengshuilin* in Gonghe Village, Meihuashan Nature Reserve, Fujian.

Each of these forest types is also closely associated with one or more of the following kinds of temples and shrines: 1) *cítáng* (祠堂), the ancestral temples that are typically placed at or near the center of the village and directly in front of the primary (*houlongshan*) *fengshuilin* (Figure 5); 2) *tǔdìgōng/gōngwáng* (土地公/公王), the earthgod shrines that in Fujian may number two to five in a single village and are located in or near virtually all *feng-*

Figure 7. Bridge temple (*qiaomiao*) in Mafang Village (Meihuashan, Fujian) with broadleaved *fengshuilin* in background. Bridge recently widened with cement slab to form new "front" of temple. Originally those who crossed the bridge had to enter through the sides that are now walled off.

shuilin (Figure 6); 3) *ānmiào* (安廟), small covered shrines that house Buddhist and Daoist deities of particular local import; and 4) *qiáomiào/fēngshuǐ qiáo* (橋廟/風水橋), which are bridge-temples—covered bridges housing elaborate shrines, in the first case, and more recently built uncovered bridges that are also believed to improve village *fengshui*, in the second (Figure 7). As Guan Tuchun, a *fengshui* master in Guizhuping village (Meihuashan, Fujian) explained, these sacred sites and the *shen* (gods and spirits) that dwell within them cannot endure without good *fengshui*. So it is necessary to maintain healthy *fengshuilin* in close proximity to each temple and shrine.[34]

Figure 8. Looking glass mangrove (*Heretiara littoralis*) in Yanzao Village *fengshuilin*, Shenzhen. Aerial view of seaside village of Yanzao, with roughly crescent-shaped *houlongshan fengshuilin* behind settlement.

From an emic standpoint, the *fengshui* settlement system optimizes the flow of beneficial *qi*; mitigates destructive *qi*; draws in and retains wealth, health, and longevity; and confers blessings upon the ancestors, the living, and generations of descendants. From an etic standpoint, it provides a cognitive map for the production and conservation of wet rice agro-ecosystems through a system of forest management, soil conservation, and erosion control that ensures long-term watershed protection and hydrological stability. Maintaining forests and other vegetation on slopes surrounding the village supports an agro-ecosystem

based on closed feedback loops of matter, with fertilizer traditionally being derived from human and livestock wastes as well as from the ashes of herbaceous plants of the forest understory that were gathered and burned for this purpose.[35] Endowing this indigenous landscape ecology with cosmic significance constitutes the village as a coherent lineage-centric space that unifies members of the community within a watershed, which is thus a cosmic center both materially and ideationally. Corporate communities can thus be understood, at least before the ideological indoctrinations of Marxist-Leninist-Maoist modernity, as wind-water polities.

Enforcement of Harvesting Bans

In all of the villages surveyed, residents stated that before 1949 there were customary punitive measures to prevent tree cutting in *fengshuilin*. In some communities the belief in supernatural retribution was sufficiently strong to act as a deterrent, and there was purportedly no need for a system of surveillance and punishment. In other villages, traditional punitive measures added weight to the fear of supernatural effects. Today these traditional forms of prohibition on cutting have been enhanced or replaced by fines imposed by the state or by village managers. In villages of Chebaling, traditional human enforcement measures were believed to have been unnecessary. In Hewu village, trees in the *fengshui* forests were believed to have magical powers of regeneration (healing rapidly if not fully cut down) and tree cutting was believed to cause illness in humans. In Xiba, a Yao village, it is still believed that spirits who reside in the *fengshui* forest can cause retributive illnesses in response to tree damage. In all of the villages of Meihuashan the traditional punishment for tree cutting was a fine of one full grown pig—a draconian penalty for most families. In Jiangxi, two villages reported that customary law required that all timber illicitly harvested from the *fengshui* forest must immediately be burned (perhaps as a sacrificial offering); one village punished offenders with detainment, beating, and deprivation of food; and one village reportedly needed no specific punishment.

Whatever the traditional punishments for violation of tree cutting and plant harvesting may have been in the past, *fengshuilin* in several villages had become subject to state enforcement policies and punishments, even if reporting of illicit activities was mostly seen as the responsibility of villagers themselves. By 2011, two of the *fengshuilin* had even been converted to state protected areas. In Yanzao (Shenzhen) the *fengshuilin* has been converted to a township-level nature reserve. *Fengshui* forests in the Meihuashan reserve are overseen by villagers and reserve managers, and tree cutting is punishable by law. In Congtou (Meihuashan), where the *fengshui* forest has become a national protected area, villagers view the state as more responsible for forest protection than the village. In Jinggangshan, *fengshui* forests associated with villages in the core area received greater state protection than those in the buffer zone. Interviewees in Chebaling reported that currently their communities are the most important arbiters of *fengshuilin* management.

In regard to management decisions relating to potential resources in the *fengshui* forests, including plant propagation, gathering, and understory clearance, there is presently no state involvement. Although there was some bamboo cultivation in the *fengshuilin* of Meihuashan, it had not resulted in severe understory clearance (despite the fact that even herbaceous plants in well-managed bamboo stands are cut down to ground level at least once a year). Commercial plant cultivation was minimal in the *fengshui* forests of Chebaling and Jinggangshan and these forests typically had extremely dense shrub and herbaceous understory layers. In none of the three major study areas was understory clearance a regular part of the management regime.

CONCLUSIONS AND FUTURE RESEARCH

Preliminary research indicates that the Chinese lineage village can be viewed, from an historical perspective, as a wind-water polity based on an indigenous landscape ecology intended to sustain life by attending to vital flows and currents. *Fengshuilin* are presently among the best long-term intentional tree refugia for biodiversity because they have been protected to serve immediate, local environmental needs without anthropogenic selective pressure based on species utility. *Fengshuilin* are also *actants* in the persistence of rural *fengshui* and village community ecology. It remains to be seen whether growing knowledge and awareness of the forests will inspire new conceptions of human-nature relations in rural southern China, and whether they will increasingly become incorporated within modern forest conservation policies and structures, including nature reserves and other protected areas.[36] In any case, *fengshui*, *fengshuilin*, and lineages comprise a central node in land tenure and biodiversity politics, and the implications have yet to be fully recognized.

Further research will focus on 1) the total distribution of village *fengshuilin* in ten to fourteen provinces and the development of a county-level GIS; 2) additional analysis of the political ecology of *fengshui* practice with regard to gender, age, affect, and the politics of nature under a regime of state-managed capitalism and mass urban-rural labor migration; and 3) present and potential roles of *fengshuilin* in new social constructions of nature and society, with special regard to conservation planning, land tenure conflict, and environmentality.[37] These three areas of research are essentially related because while the former will provide the first accurate view of the distribution of village *fengshuilin* in China beyond the Hakka culture region, the second will enhance our understanding of how these forests figure in the lives of rural residents and, in some cases, urban visitors as well. Policies associated with the New Socialist Countryside (新社会主义农村, *xīn shèhuìzhǔyì nóngcūn*)[38] and national forest protection programs[39] are likely to affect village land use in complex ways. Ongoing multidisciplinary research on *fengshui* forests will strengthen our study of biodiversity conservation and other contemporary environmental challenges in China.

NOTES

1. See E.N. Anderson and Marja Anderson, *Mountains and Water: Essays on the Cultural Ecology of South Coastal China* (Taipei: Orient, 1973); George W. Lovelace, "Man, Land, and Mind in Early Historic Hong Kong," in *Cultural Values and Human Ecology in Southeast Asia*, ed. Karl L. Hutterer, A. Terry Rambo, and George W. Lovelace (Ann Arbor: University of Michigan Press, 1985), 341-372; Wei Fan "Village *Fengshui* Principles," in *Chinese Landscapes: the Village as Place*, ed. Ron Knapp (Honolulu: The University of Hawaii Press, 1992), 35-45; Nicholas K. Menzies, *Forest and Land Management in Imperial China* (New York: Palgrave Macmillan, 1994); and Yeo-Chang Youn et al "Northeast Asia," in *Traditional Forest-Related Knowledge: Sustaining Communities, Ecosystems and Biocultural Diversity*, ed. John A. Parrotta and Ronald L. Tropper (New York: Springer, 2012), 281-314.
2. See Zhuang Xue Ying and Richard T. Corlett, "Forest and Forest Succession in Hong Kong, China," *Journal of Tropical Ecology*, 13 no. 6 (1997): 857-66; Chris Coggins, *The Tiger and the Pangolin: Nature, Culture, and Conservation in China* (Honolulu, University of Hawaii Press, 2003); Thomas C.Y. Chan, ed., *Venturing Fung Shui Woods* (Hong Kong: Cosmos Books, Ltd., 2004); and Hu Liang et al, "Values of Village Fengshui Forest Patches in Biodiversity Conservation in the Pearl River Delta, China," *Biological Conservation* 144 no. 5 (2011): 1553-59. The last of these studies shows that *fengshui* forests in the Pearl River Delta have a higher diversity of plant species than other broadleaved forest patches in the region. An additional field study, conducted by Yuan and Liu, focuses on *fengshui* forest management among the Buyi ethnic group in Guizhou Province; see Juanwen Yuan and Jinlong Liu, "Fengshui Forest Management by the Buyi Ethnic Group in China," *Forest Ecology and Management* 257: 2002-09.
3. The Hakka (*Kejia*, "Guest People") are a Han subethnic group numbering roughly 40 million in China. Having migrated to southern China later than other Han peoples, the Hakka often could not settle in prime agricultural lands and instead developed lineage villages in mountainous areas, producing wet rice, bamboo, tea, Chinese fir, and other silvicultural products. Today they are found mostly in southwest Fujian, southern Jiangxi, Guangdong, Guangxi, and Sichuan.
4. See Chi-Wu Wang, *The Forests of China* (Cambridge, Mass.: Harvard University Press, 1961) and Nicholas K. Menzies, *Forest and Land Management in Imperial China*.
5. See Eric Wolf, "Ownership and Political Ecology," *Anthropological Quarterly* 45 no. 3 (July 1972): 201-05;

Richard Peet and Michael J. Watts, eds., *Liberation ecologies: environment, development, social movements* (New York: Routledge, 1996); and Paul Robbins, *Political Ecology: a Critical Introduction* (New York: Blackwell Publishing, 2012).

6. David Faure, *Emperor and Ancestor: State and Lineage in South China* (Stanford: Stanford University Press, 2007), 1. Citing Maurice Freedman, Faure states that "…the lineage was essentially a corporation, that is to say, a body that had a clear idea of membership and was able to hold property. In South China…the lineage came to be defined as the corporation in which common descent was an essential feature of membership… [which] had to be demonstrated through participation in sacrifice and the active tracing of genealogy."
7. See Michel Callon, "Techno-Economic Networks and Irreversibility," in *A Sociology of Monsters: Essays on Power, Technology and Domination*, ed. John Law (London and New York: Routledge, 1991); and Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network-Theory* (Oxford: Oxford University Press, 2005).
8. See Sylvie Démurger, Hou Yuanzhao, and Yang Weiyong, "Forest management policies and resource balance in China: an assessment of the current situation," *Journal of Environment and Development* 18 no. 1 (March 2009): 17-41; Jianguo Liu and Jared Diamond, "China's Environment in a Globalizing World," *Nature* 435 (June 30, 2005): 1179-86; and Alicia Robbins, "China's Forest Sector: Essays on Production Efficiency, Foreign Investment, and Trade and Illegal Logging," (Ph.D. thesis, University of Washington, School of Environmental and Forest Sciences, 2011).
9. See Mark Elvin, *The Retreat of the Elephants: an Environmental History of China* (New Haven and London: Yale University Press, 2004); and Conghe Song and Yuxing Zhang "Forest Cover in China from 1949 to 2006," *Reforesting Landscapes: Linking Patterns and Processes*, ed. H. Nagendra and J. Southworth, (New York: Springer, 2010), 341:56.
10. The Sloping Lands Conversion Program (*Podi Zhili Xiangmu*), or "Grain for Green Program" (*Lianggeng Huanlin Gongcheng*), was implemented in 1999 with a goal of increasing the area of forests and protecting watersheds from erosion and flooding by providing annual grain subsidies to farm families until the year 2010 in exchange for their retirement of croplands and conversion of these and barren lands to forests. The program targeted mountain and hill lands with slopes exceeding 25 degrees, and resulted in the conversion of over 20 million hectares of land into primarily tree-based plantations and is the largest land retirement program of its kind in the world, involving 25 provinces in China.
11. Conghe Song and Yuxing Zhang, "Forest Cover in China from 1949 to 2006."
12. Xue-Yu Hou, "Vegetation of China With Reference to Its Geographical Distribution," *Annals of the Missouri Botanical Gardens* 70 no. 3 (1983): 509-48.
13. D.E. Boufford and S.A. Spongberg, "Eastern Asian-Eastern North American Phytogeographical Relationships—A History from the Time of Linnaeus to the Twentieth Century," *Annals of the Missouri Botanical Gardens* 70 no. 3 (1983): 423-49.
14. Arun Agrawal, *Environmentality: Technologies of Government and the Making of Subjects* (Durham, N.C.: Duke University Press, 2005).
15. See Andrew Jacobs, "Village Revolts Over Inequities of Chinese Life," *New York Times*, December 14, 2011 and Michael Wines, "A Village in Revolt Could Be a Harbinger for China," *New York Times*, December 15, 2011.
16. Liu Xiaobo, "The Land Manifestos of Chinese Farmers," in *No Enemies, No Hatred*, ed. Liu Xiaobo et al (Cambridge, Mass.: Harvard University Press, 2012), 33.
17. Ibid., 31.
18. See Stephan D.R. Feuchtwang, *An Anthropological Analysis of Chinese Geomancy* (Vientiane, Laos: Vithagna, 1974); Wei Fan, "Village *Fengshui* Principles"; and Ole Bruun, *An Introduction to Feng Shui* (Cambridge: Cambridge University Press, 2008).
19. See He Bukun, Yu Dejiang, and Ku Xiongchang, eds., *Senlin Shumu yu Shoashu Minzu* [*Forest Trees and Minority Nationalities*] (Kunming: Yunnan Nationalities Publishers, 2000); and Chris Coggins and Tessa Hutchison, "The Political Ecology of Geopiety: Nature Conservation in Tibetan Communities of Northwest Yunnan," *Asian Geographer* 25 nos. 1 and 2 (2006): 85-108.
20. E.N. Anderson and Marja Anderson, *Mountains and Water: Essays on the Cultural Ecology of South Coastal China*.
21. David Faure, *Emperor and Ancestor: State and Lineage in South China*.
22. E.N. Anderson and Marja Anderson, *Mountains and Water: Essays on the Cultural Ecology of South Coastal China*, 48.
23. Ibid., 40.
24. Yeo-Chang Youn et al, "Northeast Asia."
25. Mao Tse-tung, "Report on an Investigation of the Hunan Peasant Movement," in *Sources of Chinese Tradition*, Volume II, ed. Wm. Theodore de Bary, Wing Tsit Chan, and Chester Tan (New York: Columbia University Press, 1960), 210.
26. Ibid., 213.
27. Chris Coggins, *The Tiger and the Pangolin: Nature, Culture, and Conservation in China*.
28. Bruno Latour, *We Have Never Been Modern* (Cambridge: Harvard University Press, 1991), 10-12.
29. This is summarized in Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham, N.C.: Duke University Press, 2010).
30. Guan Tuchun, pers. comm. July 13, 2011, Guizhuping Village, Fujian. Ma Shengxue et al. pers. comm. July 13, 2011, Mawu Village, Fujian. Wei Fan, "Village *Fengshui* Principles."
31. Wei Fan, "Village *Fengshui* Principles."

32. Ibid.
33. Chris Coggins, *The Tiger and the Pangolin: Nature, Culture, and Conservation in China*.
34. Guan Tuchun, pers. comm. July 13, 2011, Guizhuping Village, Fujian.
35. Ibid.
36. See Owain Jones and Paul J. Cloke, *Tree Cultures: The Place of Trees and Trees in Their Place*. (Oxford: Berg, 2002); and Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network-Theory*.
37. Arun Agrawal, *Environmentality: Technologies of Government and the Making of Subjects*.
38. Promulgated in March 2006 by the National People's Congress, the policy outlines the government's intention to "build a new socialist countryside" through increased funding for poor local governments in conjunction with administrative reforms and "efforts to increase…rural income through a mixture of infrastructural investment, agricultural specialization, the expansion of social welfare, and accelerated urbanization. See Anna L. Ahlers and Gunter Schubert "'Building a New Socialist Countryside' – Only a Political Slogan?" *Journal of Current Chinese Affairs* 4 (2009): 35-62.
39. For a comprehensive review of China's major national forest programs since 2000, see Liu Dachang, "Reforestation After Deforestation," in *Good Earths: Regional and Historical Insights into China's Environment*, ed. Abe Ken-ichi and James E. Nickum (Kyoto: Kyoto University Press, 2009).