

Damon, Frederick H. *Trees, Knots, and Outriggers. Environmental Knowledge in the Northeast Kula Ring*. New York: Berghahn Books 2017. ISBN 978-1-78533-320-0 (paperback). xiv+375pages, index, online photographic essay.

Frederick H. Damon is well known as a cultural anthropologist adept at conveying the meaning of Melanesian symbolic schemas. Taking up a different challenge several decades ago, Damon embarked on the project of understanding the technical and ecological knowledge of Massim cultures. *Trees, Knots, and Outriggers* relates the journey, and the findings, of this endeavour. Damon sets out how he met the challenge of engaging ethnographically with local understandings of land management, gardening, and sailing technologies, in part, by drawing on (and drawing in) climate, soil and botanical scientists to help parse the practices and 'collective representations' of people located in this region of island Melanesia.

Damon's title is indicative of the way he chose to approach the topic. His definition of the area is by cultural practice ('the Northeastern Kula Ring'), not by geographical location, soil types, or climatic zone. The 'Kula Ring' (as all first year anthropology students know), has been and in changing circumstances continues to be a system of inter-island trade and prestige, made famous by Bronislaw Malinowski's pioneering ethnographic work in the early 20thC. The practices that Damon describes are necessarily located as a historical, shifting, temporally and culturally situated, knowledge.

The book opens with a generous and important forward in which Damon combines personal acknowledgements of his indigenous and scientific collaborators with a sense of the breadth and complexity of what is to come. Page one of the introduction tells us that, 'this book is an ethnography of flora. It describes how trees and other plants are understood and used to make and comprehend lifeways' (3). Damon refers to the novelist Charles Dickens as his model in constructing the text. The narrative is personal, it is sprawling and rich, and the revelation of where the information was gathered, in what context of enquiry, and in speaking to whom, suffuse the text with a sense of the personal in relating a journey of discovery. Taking this at face value, and not reading too critically (which might distract one's reading, and one needs full concentration for this text), it is this frame of learning and discovery that structures the book.

The first chapter is about trees, gardens, and fallow land. Damon is interested in how people model land and fertility in relation to the growth of tree species and fallow types. The investigation moves from the characteristics of particular trees, their (local) designation as 'sweet' or 'bitter', and biochemical analyses of their properties, to transformations of spaces through time and work. To how flora are integral to defining places for local populations. Finding discrepancies between practices and definitions, Damon concludes there is an issue with (understanding their) modelling. The second chapter goes further into tree types and fallows, focussing on classification and categorisation. The emphasis in the region (and therefore in what he could discover) is on differences and differentiation rather than grouping through similarity, and their categorisation relies on land type and companion flora in the naming and understanding of plants and their relations. We learn that fallow types are both time-dependent, and dependent on the management (or otherwise) of tree growth in them. The reader is left

in no doubt from these two chapters that people's perception of their lands and its anthropogenic history is deeply entwined with knowledge of different trees and their effects on soil, and on crops.

Chapter three dwells on a distinction between uncut areas (with various ecological functions), and meadow areas. Damon explains that the aim is to, 'describe[s] the shapes that trees bring to the social structures across the Kula Ring's northeastern sector. By the end [of the chapter] it is clear that knowledge of patchy places – [...] – is distilled information about distinctive human action' (124). Chapter four provides a detailed description of important *Calophyllum* (genus) trees, detailing key differences in growth and in the grain structure of the wood that are important for canoe design and manufacture. Discussions of grain, flexibility, weight, strength etc., as well as of origin, growth patterns, human intervention, availability, serial substitution of parts (as canoes are moved between people and places) build a fascinating picture of the canoe as a process that begins with fallows and tree growth. The relation of sailing techniques and wind conditions to the wood types resulting from forest and meadow management is engrossing.

Chapter five tells of knots, and the elegance of various forms of binding, essential for the making and maintenance of the large outrigger canoes that make the trade and political system of the region possible. Vines, string, and knots are not only practical for binding material. Damon argues they are a key conceptual component for the regional system. Visualising the transformations of form that make a knot is paradigmatic to transformations of land, gardens, and fallows, of tree crops and food; of boat materials, and of relations between places that, in conjunction, provide the elements of the wider system. String figures (through which people practice knotting) are not (just) an entertainment. Everyone learns through them. As Damon puts it, 'these forms generate the tactile experience of a conceptual core. Literally the beginning of this social system, these practices rehearse its transformations. And as connecting devices, they bring us to the ultimate form they enable,.. [sailing canoes]' (292). Chapter Six describes in close detail the parts and construction of those canoes, and how their manufacture at one and the same time enables movement and *is* a movement of materials, things, and people in which the regions' gardens and fallows, trees and vines, are made and integrated as necessary parts.

Damon offers a powerful image in this final chapter of the necessity for contradictory forces to produce the motion of a sailing canoe. The pressure from the wind is accommodated by, and resisted by, the hard won and collective labour of the sail, by the intricate spring mechanism that holds the mast, and by the construction of the hull. The contradiction between the forces of the wind and the wood/knot/canoe is what produces motion. So too, Damon suggests, do differences between, and divergences in, practices and specialisms, ecological, and anthropogenic elements. Because they are different, places and practices can have different effects that bring 'the system' into being as a unique process of life.

Such complicated and unfamiliar subject matter obviously requires conceptual and linguistic resources to aid comprehension. Damon interrogates what the language and practice of plant and soil scientists can illuminate about knowledge in the region. This is

presented in the same personal discovery, narrative style. Damon's aim is not to compare or critique their contrasting, underlying political implications. Happily, these scientist's interventions (in the early chapters, they rather disappear in the later ones) are not a matter of translating 'indigenous' knowledge into 'scientific' and thereby transforming it. Instead Damon brings their analytic processes and descriptive resources to bear on the material. He explores what these may reveal for him about aspects and elements in a different conceptual and linguistic scheme. It is admirable that the description of comparative effort (among experts in both places) highlights inconclusiveness, different logics and different priorities. These sometimes speak to one another and overlap, and sometimes do not. Neither is undermined.

For all these attributes, and perhaps because of them, the text can be demanding. Firstly, there is the unfamiliarity of the material being conveyed. This is both linguistic (vernacular terms are used throughout) and also to do with the subjects covered. The unfamiliarity of both is closely allied, as the terms from the vernacular are used because, and to cover, concepts and practices that combine and articulate aspects of indigenous practice that are necessarily unfamiliar to outsiders. Tree types are modelled in ways that cross cut western taxonomy (and western taxonomy itself is an esoteric area for most of us). We learn that in the northeastern Kula Ring, flora define places and areas in ways that confound simple correlations between what soil science or expert botanists know, and what Muyuw people know.

Damon proceeds with a slow piecing together of information and opinion from different informants about practices and understandings in different areas in the region. The fact that the English language does not have terms that consolidate concepts in the same way as Muyuw people combines with the variety of interpretations and understandings of different informants within the Muyuw villages, or neighbouring islands. Each in itself makes for difficulties in comprehension. Together they magnify what was obviously Damon's own experience. Whether one gets a coherent sense of how practices are conducted as a general rule for the area is not obvious. But this becomes part of the point. Damon's attention to local variations, and to the different information received over an extended, interrupted, and shifting enquiry (3), is a picture of a variegated and adaptive socio-ecological practice. The first chapters are not a 'how to' book, unless that is a methodological 'how to comprehend' a wider system in which knowledge of trees and gardens, fallows and orchards, are tied together in different ways by different places. So anyone looking for a simple formula that could be applied in managing such environments will be disappointed. But that is also the point. By revealing partiality, distribution, contrast and alternatives, Damon is eventually able to describe two things clearly: details of the variable practices, trees, ecology, landscape management etc., *and* the overall shape of a knowledge system (which is also a social and technical system). The insights are profound exactly because they show the complex interleaving and dependence of the social and biochemical differences. Differences in ways of doing things (and, 'a lot of attention was paid [to] minute differences' (56)) are social-structural *and* biochemical.

We already know of an apparently deliberate distribution of specialisms and skills from ethnographies of Melanesian trade systems (e.g. Harding 1967), and know of the principle of the generative, differentiating, social systems of the region from many

ethnographies. Damon adds complex detail (and even messiness) to this understanding. Specialisms are sometimes distributed because they have to be (materials grow best in one place and not in others), sometimes because people *choose* to make conditions suitable for different material production, sometimes distribution is a mechanism for dealing with extreme climate variations. In every case though, Damon argues, the integration of materials and their distribution into social activities is always about a specific social-ecological system and thus what we could call a moral as well as practical human ecology (289).

Damon's book is not about esoteric knowledge (in the sense of arcane, although there are descriptive passages about magical plant use. And some people know some things that others do not, of course). This book is about a knowledge form that is necessarily hard to pin down at times. (And the reading I offer here is also interpretive, of course.) Damon's writing is suffused with a kind of humility in the face of such deep and complex knowledge -- in which it is clear that he trusts -- leading the reader straight into the difficulties of comprehension, and often admitting the limits of his understanding or ability to reconcile elements. A line, quoted from one of his scientific interlocutors (about the fact that they may not quite understand the reason or function of certain outrigger canoe design elements) is that, 'the sea does not lie'. This *bon mot* offers an insight into the ethos behind Damon's humility. He is captivated in the end by the adaptive, the process oriented, and the integrative/differentiating aspects of a regional system in which practicality is a crucial condition. The fact that there are contradictions between elements, or between ideas in one place and another about the 'same' thing or phenomenon is not taken as evidence of incoherence or error. Damon's remarkable achievement is to trust that his investigation is always partial, that the many insights he gains and passes on are pointers to a larger set of understandings, processes, and possibilities, rather than the 'thing' itself.

As we read the final chapters, we learn that how a canoe is built is a matter of shaping, tying and using, testing (and failing) and adapting. 'Knowledge' is necessarily moving, like the canoe, as, 'relations between relations between things' [Plato] (301). The sea does not lie, trees do grow differently and thus have different effects, in different areas. Crops are always part of peoples' relations with one another (and between their lands) in which inversions and contrasts play both aesthetic and practical roles. The reward for sticking with Damon through his occasionally inconclusive and tortuous narrative is that one glimpses that rarest of insights -- how the aesthetic *is* the practical. Gregory Bateson, who is invoked in the epigraph to the final chapter, would certainly approve.

Knowledge 'of' plants is also of places and terrains, of soils, and the conditions of growth. Knowledge moves towards usage, and usage is always a matter of social positioning, time, place, and need. Need is conditioned by who one is in relation to others. Damon's interpretive skill is richly present then. His departure has returned from materials and soils to the material of culture: knowledge is always a social matter, and the matter of canoe making/gardening/feeding people is tying elements together into a meaningful, articulate, life.

In this book, Damon is cognizant of the major climatic cycles and winds of the region in light of these insights. 'Adaptation' and 'ecology' are built upon distributed possibilities

for varying production and use in different places. Places are linked. Trade is also kinship, and kinship is also the means of production. The distribution of 'knowledge' and 'practice' is a distribution of an integrated-potential-complementarity. In 'normal' years and circumstances, varieties of practice and competence make places distinct, even at odds, with one another. In extreme climatic conditions, a complementary fit of difference comes into being as one part of the region becomes the source of another's necessities. Such cycles are reciprocal. As Damon concludes in this totally original, fascinating, and valuable book, 'social and temporal relationships overlap just as the fallows across the landscapes of the northeastern Kula Ring become cross cut to produce different resources for the vehicles that bind them together. As motion is built into the boats to facilitate contradictory dynamics, so are social relationships coordinated with respect to complementary divergences' (343).

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