

## INTRODUCTORY REMARKS: THE HERITAGE OF TRADITIONAL AGRICULTURE AMONG THE WESTERN AUSTRONESIANS

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The five papers presented here examine the diverse heritage of traditional agriculture found in different areas of Indonesia. All of these papers are based on long fieldwork in a particular region. Thus the general argument of Christine Helliwell's paper is based on research in West Kalimantan; Timothy C. Jessup's paper focuses on shifting cultivation in a remote area of East Kalimantan; while Kusnaka Adimihardja's paper considers the rituals and practices of a community of traditional agriculturalists in West Java. Moving further to the drier eastern regions of Indonesia, E. Douglas Lewis's paper examines the cultivation system of a relatively isolated population in east central Flores in the province of Nusa Tenggara Timur while my own paper, although it draws heavily on research on the small island of Roti, uses ritual and lexical evidence to consider the whole of the outer arc of the Lesser Sundas. Together these papers point to a common Austronesian heritage that has been continually enriched by the adoption of new cultigens and by the development of new modes of cultivation.

The cultivation of rice was clearly crucial to an early Austronesian heritage and discussion of modes of rice cultivation is central to an understanding of the Austronesian past. Helliwell, in her paper, aptly examines the range of factors that underlie the commitment to either dryland or irrigated rice among different Borneo groups, noting the genetic research that indicates that dryland varieties of rice represent a later development of rice from its original inundated forms. She argues that there is more to the question of modes of rice cultivation than simple economic rationality or ecological appropriateness; much has to do with associations of ethnic identity and, for some ethnic groups, a basic desire to remain socially mobile. To such groups, the cultivation of wet rice requires too great a commitment to "permanency", which is viewed almost as a kind of enslavement. Helliwell goes on, however, to argue that for most Borneo societies the cultivation of wet or dry rice is not an either/or situation. There has always been a "constant flow of people, technology and knowledge that occurs in both directions" toward and away from different modes of cultivation.

The theme of variability in cultivation with which Helliwell concludes is the main concern of Jessup's paper. The remote area of the Apo Kayan, which he has studied, is one of the few areas of Southeast Asia to have experienced a declining population for over a generation as local inhabitants have emigrated in large numbers in search of new opportunities in the lowlands. As a result more land has become available for those who have remained and there has been less need to open new swidden cultivation sites in primary forest. Under these circumstances, recognized rules of land tenure have become less relevant and problems of the allocation of scarce labour among households more pressing. In all of this, Jessup emphasizes the importance of variability, which is particularly evident in cultivation of a great diversity of crops. In addition to thirty seven varieties of rice, including swamp rice, cultivators in the Apo Kayan planted their swidden gardens with maize, cucumber, squash, beans, Job's tears, tobacco, cassava, sugar cane and banana. Some of these crops were either intercropped in gardens with rice or planted in mixed gardens without rice. This kind of complex intercropping would appear to have been a common feature of Austronesian agriculture.

Complex intercropping is the subject of Kusnaka Adimiharja's paper. This paper is an engaging study of a little-known group, the Kasepuhan, whose traditional agricultural practices and rituals are a mark of their identity. Through their distinct traditions, the community of Kasepuhan maintain a continuity with their ancestors in an area, West Java, that is noted for its remarkable success in adopting the technology of the green revolution. The paper examines the successive stages of the cultivation of a dry swidden garden and describes the various rituals involved in its cultivation. Of particular interest is the diagram in Figure 1 that sets out the pattern for the planting of such a garden: Job's tears are planted to form the periphery of the garden; then a variety of traditional rice (*pare gede*) is planted as a second boundary around the garden; and finally, other varieties of rice plus millet are intercropped with maize, pigeon pea, sesame, arbil and cucumber within the double boundary of Job's tears and rice. This pattern could, in some ways, be interpreted as a spatial representation of the temporal sequence of the adoption of different crops within a developing system, with the older crops guarding the periphery.

Lewis's paper adopts an ecosystems approach to the study of a remote valley, Tana 'Ai in central east Flores. The human populations of this valley are critical "regulators" of this ecosystem. Their culture and the organization of ritual play a fundamental part in the management of the environment. Interestingly, the valley of Tana 'Ai can be usefully compared to the Apo Kayan since, as Lewis points out, the stability of the valley's ecosystem has been maintained by the regular "export" of its excess population. Lewis notes the importance of "houses" (*lepo*) both as social units and as the regulating units of the ecosystem. The heads of these "houses" are women. Hence, as Lewis phrases it, "in their capacity as determiners of land use and governors of labour, these groups of women serve as regulators of the ecosystem of the Tana 'Ai valley". In Tana 'Ai, as in the other case studies presented here, cultivation is complex and variable involving the planting of rice, maize, sorghum and a variety of other cultigens.

The final paper in this section, my paper, considers the variety of cultigens that form part of the heritage of traditional agriculture in eastern Indonesia. The paper considers lexical and ritual evidence relating to no less than twenty-five of the principal food crops of the region. The paper points to the importance of millet along with rice as an early Austronesian food crop. It also calls attention to the importance of Job's tears, mentioned both by Jessup and Kusnaka in their papers, as an early cultigen that has now been largely relegated to ritual status or has been progressively replaced by sorghum and thereafter by maize. Both botanical and lexical evidence indicate a progressive shift in relative importance of cultivation from Job's tears to sorghum to maize as a pattern that has been repeated in different areas of the region. As the paper argues, this shift is just one example of the transformation of traditional agriculture by the adoption of new crops, at different stages, in a continuously developing system.

One of the principal reasons that the papers in this section relate to one another is because the systems they describe are themselves related in complex ways to one another. As a coherent collection of essays, they provide some sense of the rich diversity and historical complexity of traditional Austronesian agriculture.