

Patrick Vinton Kirch and D. E. Yen, *Tikopia: The Prehistory and Ecology of a Polynesian Outlier*. Bernice P Bishop Museum Bulletin 238. Honolulu: Bishop Museum Press, 1982. Pp. xviii, 396, 129 figures, 54 tables. Paper \$32.00.

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Tikopia is a Polynesian "outlier" in the eastern Solomon Islands, Sir Raymond Firth's extensive ethnographic writings have made it one of the Pacific's best documented communities. *Tikopia: The Prehistory and Ecology of a Polynesian Outlier*, by Patrick Kirch and Douglas Yen, is a worthy addition to the island's literary corpus.

The study on which this book is based grew out of an attempt to answer several related questions. First and perhaps foremost was to determine the ancestral homeland of the Polynesian outlier communities. Scholars have debated this issue for almost a century (e.g., see Thilenius 1902; Churchill 1911). Are they relict populations left behind in the course of a great eastward migration from the Asian mainland, through the islands of the western Pacific, and out into the Polynesian Triangle? Or are they the result of later "back-migrations" from territory commonly regarded as Polynesia proper? The authors' involvement in an interdisciplinary study of culture history in the southeastern Solomons during the early 1970s forced them to take a careful look at this problem. In addition, Tikopia has figured prominently in the debate almost from the start (e.g., see Rivers 1914:237-238). Aside from its critical location on the eastern fringe of Melanesia, the extensive ethnographic data and traditional history reported by Firth make the Tikopia case particularly salient.

A second set of questions involve sequence of occupation. In 1971 Kirch and Rosendahl (1973) excavated Anuta, Tikopia's nearest neigh-

bor, 120 km to the northeast. Evidence of habitation on Anuta was discovered to date back close to three thousand years, suggesting the likelihood of at least an equally long period of occupation for Tikopia. Moreover, the Anutan data raised a number of perplexing questions that seemed likely to be elucidated by archaeological findings from Tikopia. Among these were: an apparent one thousand-year hiatus in Anutan settlement; the cultural affiliations of pre- and post-hiatus populations; the history and prehistory of interisland contacts; and the relationship between oral tradition and archaeological reconstruction. These issues have been discussed by Kirch and Rosendahl (1973), Davidson (1975), Feinberg (1976), and subsequent to *Tikopia's* publication, by Kirch (1982).

A final set of questions involved the relationship between Tikopia's human inhabitants and their cultural and natural environments. To understand this relationship required documentation of environmental exploitation and geological change over a period of several millennia. Geological data were provided courtesy of the Solomon Islands Ministry of Lands and Natural Resources. Environmental exploitation was elucidated by the combined inputs of archaeological and ethnobotanical evidence. Analysis of Tikopian agriculture was based on journal entries and records of early European explorers; Firth's descriptions dating to the 1920s; contemporary observations by Yen; and careful comparison with other Pacific islands--particularly Anuta.

The project taken on by Kirch and Yen was clearly an ambitious one. On the other hand, the researchers--a renowned ethnobotanist and an accomplished Pacific archaeologist--were well suited to the task. Overall, they have turned in a creditable performance, integrating the several strands of data and presenting the results in a cogent, readable form.

For the most part, the authors' findings fulfilled their expectations. Tikopia's period of continuous habitation does indeed begin almost three thousand years ago, with tenuous suggestions of sporadic visits dating back close to another thousand years. Kirch and Yen divide Tikopia culture history into four periods, each typified by a distinctive artifactual assemblage. The earliest, termed the "Kiki Phase," is characterized by Lapitoid ceramic ware and lasted from about 900 to 100 B.C. The Kiki Phase gave way rather abruptly to the "Sinapupu Phase," characterized by incised Mangaasi-style pottery, apparently imported from northern Vanuatu. The Sinapupu Phase lasted to perhaps the fifteenth century A.D. and gradually gave way to the "Tuakamali Phase." The latter period is distinguished by a characteristically Polynesian arti-

factual assemblage and complete disappearance of ceramic ware. European contact began with Quiros' visit in A.D. 1606, and by the early 1800s important changes had been wrought. Kirch and Yen use A.D. 1800 as the date marking the end of the Tuakamali and the inception of the "Historic Phase."

Over the period of human habitation, the natural environment evolved along with the cultural. Erosion was offset by shoreline aggradation, encouraged by a growing emphasis on arboriculture, featuring *Calophyllum*, coconut, and *Antiaris* (the local bark-cloth tree). As a result, Tikopia's land area has increased substantially over the past three millennia, with a corresponding reduction of the fringing reef. During the Tuakamali Phase, an open saltwater bay was transformed into a brackish lake. As early as the Kiki Phase, marine life and avifauna became less abundant, and wild animal protein was supplemented with domestic pig. Pig husbandry flourished briefly, but was abandoned late in the Sinapupu Phase.

Through the entire sequence, contact with the isles of northern Vanuatu, Santa Cruz, and Western Polynesia attests to a complexity belying the apparent isolation of this tiny dot of land amid the vast Pacific Ocean. Thus, while the relict population theory receives no support, the authors also find the back-migration hypothesis overly simplistic and, therefore, unsatisfactory. Significantly, despite persistent concern with the relationship between man and environment, the authors shun environmental determinism. Rather, they give considerable credence to the symbolic construction of reality and recognize a dialectic in which people adapt to their material surroundings, while those surroundings are transformed and in a sense created in the adaptation process.

Perhaps the most enlightening and potentially controversial sections of the book are those exploring the relationship between oral tradition and culture history. Anthropologists have generally avoided interpreting traditional materials as historical, or even quasihistorical documents. Thus I felt myself at considerable risk when I commented several years ago that "I am inclined to give general credence to the Anutans' version of their island's history, at least in its broad outlines" (Feinberg 1981:7). And therefore, I was particularly pleased to find a close convergence between Tikopia's oral history and culture history as reconstructed from archaeological, geomorphological, and other material evidence convincingly documented in Kirch and Yen's report. In their book the genealogical time depth of Tikopia's current Polynesian population, the civil wars leading to extermination or expulsion of groups

known as Nga Ravenga and Nga Faea by Nga Ariki (ancestors of the present inhabitants), the founding of the Taumako "clan" by a Tongan chief named Te Atafu, and the combination of Polynesian and Melanesian strains to form the current Tikopia population--all recorded in detail by Firth--receive external affirmation.

The authors also briefly reconsider the Anuta sequence in light of Tikopian data. Particularly gratifying here is confirmation of my argument (Feinberg 1976) that Anuta's original settlers--who occupied the island for a period of several centuries prior to a long hiatus--are different from the *apukere*, "autochthones," of current oral tradition. Also in my 1976 comment, I noted (contra Kirch and Rosendahl 1973 and Davidson 1975) that although oral traditions distinguish the *apukere* from Anuta's present population, there is considerable evidence suggesting that the *apukere* themselves were Polynesians. Kirch and Yen (pp. 344-345) have now presented evidence, albeit inconclusive, indicating that even the pre-*apukere* ceramic-makers may have been migrants from the Polynesian Triangle. (This is not to say that they were Polynesian in the contemporary sense as the cultural and genetic affiliation of the classical Lapita-makers is, itself, uncertain. However, it does indicate the long-standing eastward character of Anuta's geographical orientation.)

Equally intriguing, the authors show significant divergences between Tikopian and Anutan prehistory, with little evidence of contact between the two islands until well into the most recent phase. This finding may help to explain a surprising report by a team of population geneticists (Blake et al. 1983) indicating that despite the close cultural, linguistic, and (apparently superficial) physical similarity between Anutans and Tikopians, and despite much intermarriage between the two communities over the past several generations, Tikopia's closest genetic relationship is with the Melanesian islands of the Banks, Torres, and Santa Cruz groups while Anuta is a genetic isolate.

As is true of any book, *Tikopia* has its flaws. Happily, most are minor. For example, one might quarrel with Kirch and Yen's characterization of Tikopia's agricultural system as being more open in the past than at present (pp. 26-27). In some respects, input from other Pacific islands undoubtedly declined with European contact, particularly with the reduction of interisland canoe travel, beginning at the time of establishment of the British Protectorate and Anglican mission. However, as interisland canoe voyaging declined, contact via ship with other islanders and Europeans increased and has had a continuing influence on the agricultural systems of islands like Tikopia and Anuta, as well as on

other spheres of life. My guess is that there may have been a relatively "closed" period from perhaps the 1920s through the 1970s when traditional voyaging was dying out and European shipping was still irregular. Over the past decade or two, however, all aspects of Tikopian and Anutan life have undergone considerable change, largely as a result of contact with outsiders.

I would similarly question reference to "the *consistent* application [of mulch to manioc gardens] on Anuta" (p. 43, emphasis added; see also Yen 1973). During the year I spent on Anuta in 1972-1973, taro was routinely mulched, but not manioc. Perhaps, by coincidence, it simply was not done while I was there. Given the food shortage and drought of the 1972 trade wind season, however, I would be surprised if this were the case.

Ecologically and archaeologically, I was struck by the omission of Patutaka (Fataka) as a possible source of food and raw materials. Patutaka is an uninhabitable island southeast of Anuta, which has been visited regularly, at least in recent generations, both by Tikopians and Anutans, and which geologically and ecologically is quite distinct from either of its populated neighbors (see Feinberg 1983). One wonders if some of the materials cited by Kirch and Yen as evidence of trade could have been quarried on Patutaka and carried back home by ancient Tikopian mariners.

A possible gap also occurs in the discussion of fishing technology. If Tikopians were at all like the Anutans, they made not only shell hooks and lures, but also small hooks out of fish bone and large ones from wood. The small hooks were used for drop-line fishing over inshore reefs and casting from shore; the large wooden ones were used for sharks and large game fish on the open sea. Both of these types may date back long time, and there is a good chance that neither would show up in the archaeological record. a

A minor irritation to me is the misrendering of several Tikopian words. "Tobacco," for example, is given as *tepaka* (e.g., p. 37). In fact, it should be *paka*; *te* is the definite article, as may be seen in such constructions as *te rau paka*, "tobacco leaf." And reference is made (p. 46) to "a channel called *vaisaria*." *Vai saria* (ANU: *vai taria*) is simply the generic term for "flowing water." On the other hand, while these are irritants to someone who has spent the bulk of his professional life immersed in the ethnography of Tikopia and Anuta, they are of little consequence to the typical reader, unfamiliar with the local vernacular.

Tikopia, despite the few minor objections, is an excellent production, thoroughly professional throughout. The argument and data are clearly

presented. The text is well edited, with few typographical errors. The book is sturdily bound with the plain but tough paper cover typical of the Bishop Museum Bulletin series. It is extensively illustrated with maps, tables, diagrams, and photographs--several in color, including a striking frontispiece showing Tikopia's crater lake and coastal flat from the summit of 400-meter-high Mt. Reani.

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