

# IFALUK ATOLL: AN ETHNOGRAPHIC ACCOUNT

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In this article I aim to draw a picture of life on Ifaluk Atoll in the 1990s, with particular emphasis on male labor and subsistence patterns. The data presented here were primarily collected during fieldwork conducted in 1994 and 1995, and to a lesser extent during a return visit to Micronesia in 1997. The ethnographic description I offer supplements earlier materials published by Burrows and Spiro (1957), Bates and Abott (1958), Turke (1985), and Lutz (1988).

## **PHYSICAL SETTING**

Ifaluk is a coral atoll located in Yap State in the Caroline Islands of the Federated States of Micronesia (FSM) at 7° 15' north latitude and 147° east longitude (Figure 1). Ifaluk is located roughly 640 km south of Guam. The nearest inhabited atoll is Woleai at 53 km west of Ifaluk, and Yap, the largest island in Yap State is located about 560 km northwest of Ifaluk. Ifaluk is part of the Woleai region of Yap State, which also includes the islands of Eauripik, Faraulep, Elato, Lamotrek, and Woleai. Ifaluk consists of four atolls, two of which are inhabited (Figure 2). The total land mass of the four atolls is 1.48 sq. km and the nearly circular lagoon is 2.43 sq. km (Freeman 1951:237-38, 273-74). The two inhabited atolls, Falalop and Falachig, are separated by a 35 meter wide channel that is less than a meter deep during high tide and completely dry during low tide. The channel can easily be crossed on foot even during high tide. It is estimated that Ifaluk receives between 254 and 305 cm of rain per year (Tracey et al. 1961). Daily temperatures range from slightly above 21°C to 35°C and remain nearly constant throughout the year. The two seasons on Ifaluk are differentiated by the presence of northeast trade winds from October through May.

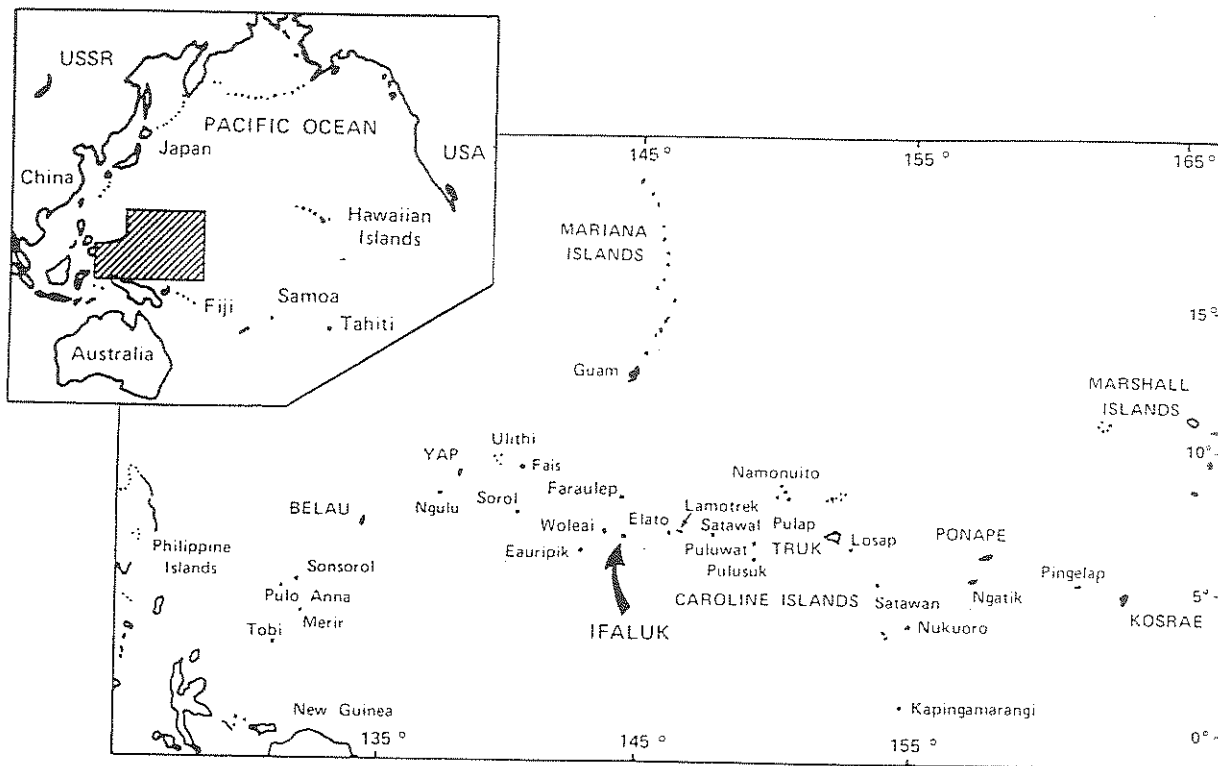


Figure 1: Map of the Caroline Islands (from Lutz 1988)



Typhoons pose a significant threat to life and property on Ifaluk (see Lessa 1964 and Marshall 1979 for discussions of the social effects of typhoons in Micronesia). Most Pacific storms pass north of Ifaluk (Tracey et al. 1961), however, occasionally Ifaluk is not so fortunate. The channel which divides Falalop and Falachig is the result of a typhoon in 1907. Thirty-five people were killed during this storm. Typhoon June, which hit Ifaluk during the 1970s, is vividly remembered by residents. Houses were destroyed and the inland taro patches were flooded and filled with sharks. More recently, in the fall of 1997, Ifaluk was hit by a typhoon which also devastated the taro crop, requiring residents to replace the staple of their diet with rice provided by FEMA. The highest area of land on Ifaluk is only a few meters above sea level, thus it is not surprising that the people of Ifaluk regularly express concern that their island will disappear in a severe storm.

## **LANGUAGE**

The native language of Ifaluk, as well as the other atolls of the Woleai region, is Woleaian. On each of the atolls of the Woleai region a different dialect of Woleaian is spoken but they are mutually intelligible among native speakers. Woleaian is a member of the Micronesian linguistic family and the Trukic subfamily (Sohn 1975). English is spoken by many of the men, but almost none of the women. Most residents of the outer islands (“outer” from Yap, the political and economic center of Yap State) do not speak Yapese, hence they communicate with Yap State residents and government officials entirely in English. In this article I follow the orthography of Sohn (1975) and Sohn and Tawerilmang (1976).

## POPULATION

There has been significant population growth on Ifaluk since American colonization of Micronesia in the 1940s. Burrows and Spiro (1957) estimate that there were 250 residents on Ifaluk during their field work in 1947. In 1967 there were 325 residents (Levin 1976) and Turke (1985) reports that there were 446 full-time residents on Ifaluk in 1983. During the 1994-95 field session, the average number of residents on Ifaluk was slightly over 600.<sup>1</sup>

There are four villages on Ifaluk. Rawaii and Mukulong are located on Falachig atoll and Iyeur and Iyefang are located on Falalop atoll. Villages consist of 5-13 matrilineal households or compounds (*bugot*). The 36 compounds on Ifaluk range in size from 1-4 houses and 3-37 residents. Houses are composed of either nuclear or extended families. Table 1 presents the residential composition and number of households for each compound on Falalop. Of the 189 individuals who lived on Falalop during the 1994-95 field session, 99 resided in Iyeur village and 90 resided in Iyefang village.

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<sup>1</sup> The movement of residents on and off the atoll was monitored for Falalop atoll but not for Falachig atoll. Census data on Falachig atoll were collected over a two month period in which there were several opportunities for residents to return to and leave the atoll. No data were collected on the number of residents for all of Ifaluk at any specific point in time. Therefore, I report an estimate of slightly over 600 residents, rather than an exact figure.

**Table 1: Number of households and residential composition of Falalop compounds**

<i>village</i>	<i>compound</i>	<i>number of households</i>	<i>number of males (≥ 14 yr.)</i>	<i>number of females (≥ 14 yr.)</i>	<i>number of children (&lt;14 yr.)</i>
lyeur	Ilug	2	5	3	8
	Harowchang	4	10	15	12
	Falichel	2	3	8	9
	Faligliow	2	1	7	3
	Hawong	2	4	6	5
	village total:	<b>12</b>	<b>23</b>	<b>39</b>	<b>37</b>
lyefang	Imtaifou	1	3	4	2
	Woluwar	4	10	12	15
	Falul	1	4	3	3
	Mataligob	1	2	5	6
	Hapelmat	1	3	2	4
	Bwabwa	1	2	3	0
	Niwegitob	1	2	2	3
	village total:	<b>10</b>	<b>26</b>	<b>31</b>	<b>33</b>
atoll total:	<b>22</b>	<b>49</b>	<b>70</b>	<b>70</b>	

The residence pattern on Ifaluk is matrilocal. Although men reside at their wife's compound after marriage, they maintain a strong bond with the compound in which they were raised, their *natal compound*. A man's bond to his natal compound is most prominently manifest in his responsibility to work for this compound. For example, men are expected to fish on the canoe of their natal compound, rather than their residential compound.

All marriages on Ifaluk are monogamous, although it has been suggested that this was not the case historically, especially among chiefs (Turke 1985). Clan exogamy is practiced, but informants claimed this norm is adhered to less frequently than in the past. During several interviews men remained silent and pretended not to hear me when I asked about their clan affiliation. Later, in private settings, I was informed that they did not want to respond to the question since they had married within their clan.

## LAND TENURE

The land tenure system on Ifaluk is complicated. Here I will only describe one aspect of the system, which is relevant for understanding resource investment and distribution patterns (see Alkire (1974) for a general discussion of land tenure in the Woleai region). Villages are comprised of plots of land that are owned by the matriline of particular compounds. Plots of land each have an *ilet* value, which affects the flow of food resources contributed and received by the owners of the land. Most plots are valued at 1 *ilet*. The number of *ilet* that a compound possesses affects how food is distributed from communal production, as well as how food is contributed to feasts or compounds caring for sick residents. There are two plots of land on Falalop which are valued at 2 *ilet*. The *ilet* value of one of these plots (Ilug Hitigid) was changed in the 1950s, which is the most recent change in the *ilet* value of a plot of land. The chiefs decided to increase the value of Ilug Hitigid, owned by Ilug compound, from 1 *ilet* to 2 because of the large population residing there. Ownership of *ilet* within a village is not restricted to compounds located in the village. Indeed, several compounds on Falachig atoll own land (and hence maintain *ilet*) within villages on Falalop atoll. On Falalop, compounds possess between 1 and 3 plots of land and the total *ilet* maintained by compounds is also between 1 and 3. Table 2 presents the names of all the plots of land on Falalop, their *ilet* value, and the compounds which own the land.

**Table 2: Name of land, number of ilet, and compound ownership for land located on Falalop Atoll**

<i>village location of land</i>	<i>name of land</i>	<i>number of ilet</i>	<i>name of compound owning land</i>	<i>village of compound</i>
lyeur	Ilug Hitigid	2	Ilug	lyeur
	Hematmaiu	1	Harowchang	lyeur
	Harowchang	1	Harowchang	lyeur
	Ilug Yaulep	1	Harowchang	lyeur
	Falichel	2	Falichel	lyeur
	Faligliow	1	Faligliow	lyeur
	Legaau	1	Faligliow	lyeur
	Hawong	1	Hawong	lyeur
	Falimay	1	Hawong	lyeur
	Yauwar	1	Hawong	lyeur
	Felepiy	1	Imtaifou	lyefang
	Haurela	1	Niwegitob/Wayishug	lyefang
	Welgesush	1	Niwegitob/Wayishug	lyefang
	Falfeliuw	1	Falfeliuw	Rawaii
	Welipiye	1	Welipiye	Rawaii
	Masalug	1	Halingelou	Rawaii
	Hapres	1	Maiyefang	Mukulong
	total:	19		
lyefang	Fetanung	1	Imtaifou	lyefang
	Hapilbwetau	1	Woluwar	lyefang
	Woluwar	1	Woluwar	lyefang
	Tabukutag	1	Woluwar	lyefang
	Falul	1	Falul	lyefang
	Mataligob	1	Mataligob	lyefang
	Hapelmat	1	Hapelmat	lyefang
	Bwabwa	1	Bwabwa	lyefang
	Hagotag	1	Felpenag	Rawaii
	Ilesaru	1	Hatibugot	Rawaii
	Somat	1	Somat	Rawaii
	total:	11		

Compounds with more *ilet* expect to receive proportionally more food at communal feasts and following communal resource production activities, especially cooperative fishing. Compounds with 2 *ilet* expect to receive twice as much food as compounds with 1 *ilet* and compounds with 3 *ilet* expect to receive three times as much as compounds with 1 *ilet*. During

the Christmas feast and the annual inter-island feast in April, food is distributed according to *ilet*. Food is also contributed to these feasts by *ilet*. For example, compounds with 1 *ilet* contribute two bowls of taro and compounds with 2 *ilet* contribute four bowls of taro. Fish caught communally are regularly distributed according to *ilet* (see below). Occasionally, when the chiefs require that all compounds contribute drinking coconuts or copra to the compound of a sick person (referred to as a *tup* in Woleaian), people are instructed to contribute according to *ilet*.

### **CLANS AND CHIEFS**

There are seven ranked matriclans on Ifaluk, the five highest ranking clans are chiefly clans (see Table 3). Clans are not localized, and members of each clan can be found in all four villages. The position of clan chief is inherited matrilineally, such that the oldest son of the current chief's sister is most likely to succeed the chief. Matriclan chiefs and elders maintain control over a wide range of community activities such as the type of fishing allowed, where a house may be built, and whether alcohol is permitted on the atoll. Each village has a chief who controls intra-village decisions such as when village-wide palm sap sharing should occur (see below), or when gifts from the village residents are given to the family of a sick person. Additionally, each compound has a chief who controls compound level decisions such as where fish should be redistributed from the compound.

**Table 3: Clans by Rank**

<i>clan name</i>	<i>rank</i>
Hovalu	1
Sauvalachig	2
Mauruvach	3
Chapavelu	4
Sauwel	5
Beweol	6
Rag	7

Chiefs maintain some measure of social control through sanctions and punishment. The primary form of punishment is cutting down the trees of a malefactor. There is considerable shame involved in this since those who are punished are consequently dependent on their kin for coconuts and breadfruit. Most recently, this punishment occurred when two teenage boys were caught with yeast, which is forbidden on Ifaluk since it is used to make strong alcohol. The men of the village were responsible for carrying out the punishment. Other forms of punishment require male offenders to make 100 fathoms of rope, and female offenders to weave many lava lava skirts. When I arrived to Ifaluk in 1994, one man was living in a small wooden cage, locked up under the order of the chiefs. Informants claimed that he had been imprisoned for three years prior to my arrival. His wife and eight children served him meals through the bars of the cage. I never received a complete explanation of why he had been jailed, but it is likely that he attempted to assault someone with a machete.

There are certainly limits to chiefly power, however, chiefs do not simply establish laws according to popular consensus. Decrees proclaimed by the chiefs are often unpopular. For instance, alcohol, which plays an important role in the social life of men, was forbidden when I arrived on Ifaluk. The decree did not entirely prevent men from making and consuming alcohol, but it certainly forced them to be discrete. At the end of my second month of fieldwork men were permitted to make alcohol from palm sap, but the traditional drinking circle which is

common throughout Micronesia was forbidden. Men were not permitted to drink with their peers; a young man could only drink with an older man so that he could inquire about Ifaluk traditions and culture, such as the details of how to build a canoe or house. Violations of this rule were relatively common yet during my stay nobody was ever punished for this offense.

After several months of these new drinking rules the chiefs added to their decree; due to men spending the entire day drunk, nobody was permitted to drink alcohol before noon.

Theoretically women are forbidden from consuming alcohol, but this is largely ignored. Men often joke that if they did not share their alcohol with the women, Ifaluk would quickly become depopulated. Although these rules were not popular and not always strictly adhered to, the chiefs did succeed in altering behavior for whatever purpose they had in mind.

## **EDUCATION AND EMPLOYMENT**

The FSM government supports an elementary school and Head Start program on Ifaluk. The Head Start Program enrolls children beginning at three years of age and the elementary school continues until eighth grade. Following eighth grade, children can attend the Near Island Middle School (NIMS) for two years on Woleai and continue their high school education on Ulithi, the largest of Yap's outer islands. Classes run according to a U.S. school year, with extended vacations around Christmas and during the summer. Schooling is not mandatory but a majority of children attend at least a few grades of elementary school. Boys are more likely to attend elementary school than girls. Ifaluk is the only outer island in Yap State where girls are forbidden to attend middle and high school, but in 1997 there were discussions about an imminent change in that policy.

Employment on Ifaluk is limited to ten elementary school teachers, four Head Start teachers, two Head Start cooks, two medical dispensators, one dentist, and one agriculturist.

Salaries are paid by the FSM government and range from \$2,000 to \$6,000 per year. All jobs are held by men with the exception of one of the Head Start cooking positions. A store is maintained on each of the inhabited atolls that offers cigarettes, flour, rice, cloth, thread, and other assorted goods. The only additional source of income on the atoll is the sale of copra which occurs approximately three times a year. At these times 100 lb. bags of copra can be sold to a Yap State government ship for approximately \$10 a bag.

While employment on Ifaluk offers extensive pecuniary benefits in a financially impoverished environment, there are additional societal responsibilities of employment. For example, employees are often required to pay for the cigarettes that are distributed following a funeral or the rethatching of a canoe house roof (see below). Ifaluk holds an annual inter-island party in April in which employees, whether residing on Ifaluk or another island, are expected to contribute \$40. Several weeks prior to the 1995 party, lists were posted in the main canoe houses of each atoll naming those employees who had not yet contributed to the party.

## **MAINTAINING TRADITION**

Despite Spanish, German, Japanese, and U.S. colonization of the Caroline Islands, Ifaluk's contact with the outside world remains quite limited due to its size and physical isolation. There is no electricity, cars, or roads on Ifaluk. A solar powered radio which was set up by the U.S. Navy enables Ifaluk residents to monitor dangerous weather conditions through contact with Yap. Medical supplies for the dispensary and food supplies for the stores are transported by the Microspirit, a Yap government ship which services all of the outer islands of Yap State. The Microspirit, which is the only regular transportation to and from Ifaluk, reaches Ifaluk approximately once every eight weeks. Yap State is unequivocally referred to as the most traditional state in FSM, and Ifaluk the most traditional atoll in Yap State. Men on Ifaluk are

often asked by the residents of neighboring islands to make a number of traditional crafts and technology such as looms, rope, or fishing nets, since knowledge of these skills have generally been forgotten on these islands. The chiefs have taken an active role in slowing the acculturation process of the island. For example, Western clothes such as shirts, shorts, or sunglasses are prohibited on Ifaluk (clothing is limited to lava lava skirts for women and loin cloths for men). Additionally, Ifaluk is the only atoll in FSM where the residents are prohibited from owning motor boats.

Falalop is noticeably more traditional than Falachig. For example, the men on Falalop maintain many of the time consuming rituals surrounding torch fishing, which are no longer adhered to on Falachig (see below). Discussions frequently confirm the difference in traditional adherence between the atolls; residents of Falachig often consider the residents of Falalop to be superstitious and the residents of Falalop lament how tradition is forsaken on Falachig. The difference in adherence to tradition may be a result of the disparity in wealth and education on Ifaluk. Only three of Ifaluk's 20 employees reside on Falalop. All employees have attended high school and several have attended school outside of Yap State. The Falalop landscape is also more traditional than Falachig; all of Ifaluk's "modern" facilities such as the elementary school, Head Start, and main medical dispensary are located on Falachig.

### *RELIGION*

Despite the general adherence to tradition on Ifaluk, most of the residents on Ifaluk are nominally Catholic. Religious practices are a unique synthesis of Catholic and traditional rituals. Missionaries have never been allowed to proselytize on Ifaluk. Men were apparently proselytized when they left the island to work, and later converted their families upon return to Ifaluk. Magic still plays an important role in native beliefs about the environment (see Spiro

1952). Unsuccessful fishing events are regularly attributed to the lack of or improper use of traditional magic. Over the next few years, knowledge of the traditional magic practices will most likely be permanently lost. As of 1997 the last remaining magician, who is approaching 70 years of age, had not taken on an apprentice.

### *CANOE TRAVEL*

While many of the long distance navigational techniques have been lost, men are still able to navigate sailing canoes to the surrounding islands in Yap State. Large sailing canoes are frequently used to travel between Ifaluk and Woleai. During the 1994-95 field session, Ifaluk residents made three round-trip visits to Woleai, which is typically a 24 hour journey. Four round-trip visits were made from Woleai to Ifaluk, two in sailing canoes and two in motor boats, which reduces the voyage to a three hour journey. Despite their impressive navigational skills, men do not always reach their destination. Two men recounted a journey in which they were lost at sea for two months (the story was verified by a number of men). Three times during the 1994-95 field session men on Falalop sailed to a reef nine miles away in order to troll for yellow-fin tuna (see below). On one occasion the men simply missed the reef and thus returned home without any fish.

### **MALE COOPERATIVE LABOR**

The single most distinguishing feature of the Ifaluk economy is the extensive cooperation in resource acquisition and the construction of material culture. Here I focus on male cooperative labor. Men and women on Ifaluk spend their days entirely separated and my extended presence among women would not have been tolerated. Indeed, the primary location of female labor, the taro patch, is strictly off limits to men.

*HOUSE BUILDING*

Only one residential house was built during my during the 1994-95 field session (see Burrows and Spiro 1957 for details on house construction). For two years prior to the actual construction event the owner of the house and some of his kin prepared all of the beams that were needed to build the house. After two years of preparation (many claimed that preparations could have been done more hastily), the chiefs set a day in which the men of Falalop were to begin assembling the house. Prior to the first day of labor, all of the men of the atoll contributed rope to the new household, which was used to connect the dozens of wooden beams of the house. Most of the men of Falalop atoll helped to build the house in an impressive showing of coordinated labor. Each work day the owners of the house supplied cigarettes and food for the laborers. On the final day, every man on the atoll contributed thatch for the roof.

*ROOF RETHATCHING*

Men regularly cooperate to rethatch the roof of a residential or canoe house. When a roof needed to be rethatched, the owners of the house informed the chiefs and they announced when the rethatching will occur. All families were expected to contribute a certain number of thatch, usually 15-20 depending on the size of the house. Women wove the thatch from dried coconut fronds, which were collected by the men. Men delivered the thatch on the morning of the event, and they helped with the labor. All men of the atoll where the house was located (either Falalop or Falachig) were expected to work at the event. After the old thatch is removed from the roof, there are three main tasks involved in rethatching a roof: 1) sitting on the roof and tying the new thatch onto the roof beams, 2) tossing the thatch to those sitting on the roof, and 3) bringing new thatch to the men tossing thatch. The roofs of seven residential homes on Falalop were

rethatched during the 1994-95 field session. Rethatching events typically lasted one and a half hours.

Following a rethatching event, men expected to be paid for the thatch they brought, regardless of whether or not they worked - the payment was entirely for their contribution of thatch. Cigarettes are the primary currency on Ifaluk, and typically, one to one and a half cartons of cigarettes were disbursed as payment. All men received an equal number of cigarettes, generally around five. The distribution process was slow but precise. To ensure that everyone received an equal share, cigarettes were distributed one or two at a time until there were none left. On a few occasions, men who sat on the roof and tied the thatch, which is considered the most difficult job, received an extra cigarette. The distribution of the cigarettes often took as long as the entire rethatching event.

In addition to residential rethatching events, I have also observed two canoe house rethatching events, one on each atoll. During both of these events the entire island was expected to contribute thatch and labor due to the large size of the roofs. During these events, a list was written that contained all of the men on the island who were expected to contribute thatch (the elderly and infirm were excluded from this responsibility). When each man brought his designated number of thatch to the canoe house his name was checked off the list, and only these men received cigarettes (more than a pack) following the rethatching event.

Cigarettes, the currency of choice on Ifaluk, play an interesting and important role in the social lives of men and women on Ifaluk. Several points are worth mentioning. First, there are only a few men and women on the atoll who do not smoke or chew tobacco. Second, this form of currency is of relatively recent in origin. The elders claimed that tobacco has only been used as payment since American colonization, although it was plentiful when the Japanese controlled Micronesia. Food, particularly breadfruit and taro, was the currency prior to tobacco.

Occasionally, food is still used as a payment labor, although rice seems to be more commonly used for this purpose than breadfruit and taro. One man who helped his cousin chop wood for his new house was regularly given fermented palm sap (*faluba*) as payment. Third, cigarettes are used in nearly all circumstances where payment is expected. For example, following a funeral, while still at the graveside, cigarettes are distributed to everyone (the employees of the island are expected to give \$10 to the family of the deceased to pay for these cigarettes). This is seen as payment for the men who built the coffin and dug the grave, and the women who wailed for the deceased. When the chiefs announce that drinking coconuts or copra are to be contributed to the house of a sick person, cigarettes are expected in return.

In a society with such extensive cooperation, it is often asked what costs free-riders face that prevent everyone from free-riding? The following anecdote describes the costs one individual faced, who everyone regarded as a “slacker.” Whenever his name was mentioned, a comment relating to his laziness would invariably follow.<sup>2</sup> During the 1994-95 field session, the roof of his hut, which he shared with his nuclear family, needed to be repaired. However, he apparently realized that if he asked the chiefs to announce a rethatching, few people would contribute thatch or show up to work. Additionally, he could not afford to purchase cigarettes and despite having employed kin he could not raise the money. I was actually forbidden by the chiefs from giving this individual money, despite his frequent requests. For five months this man lived with plastic on his roof to prevent his family from getting wet. During this time he set out to slowly build his own stockpile of thatch. I estimate that his roof, which was small, would require over 700 thatch to repair. After five months of weaving and collecting leftover thatch

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<sup>2</sup> Observational data support the community’s assessment. This individual was never observed fishing and his attendance rate at community-wide rethatching events was the lowest among men under 50 years old.

from other repair events, this man finally asked the chiefs for assistance. In a truly unique decision, the chiefs requested that each family contribute five thatch to repair his roof and the repair event would take place in a few days. There was less participation at this repair event than any other I observed, although with the help of his wife's kin the job was completed. Instead of cigarettes, taro and breadfruit were fed to everyone who was present. There was no shortage of grumbling about this form of payment.

While the extent of cooperation on Ifaluk is impressive, at times cooperation is difficult to achieve. For instance, although men almost invariably show up to build or repair the traditional canoe houses, they never heed the chiefs' requests to continue the building of the school, which has apparently remained unfinished for years. Another example concerns the carrying of fish to the villages after a successful catch. After the chiefs permitted the fermenting of palm sap, men rushed to cut their coconut trees directly after the morning fishing, leaving the fish behind for others to carry. Ultimately, the dividers were advised to refrain from dividing the fish until enough men returned from cutting their tuba to carry the fish.

## **SUBSISTENCE**

Ifaluk is primarily a subsistence economy. The diet largely consists of pelagic and reef fish, taro, breadfruit, and coconut. When in season banana, apple, and papaya are consumed almost exclusively by children. Pigs, chickens, and dogs are also raised for consumption and usually only prepared for bi-monthly feasts. White rice is the most frequently purchased food product, although not all residents can afford it. There is no refrigeration on Ifaluk. Fish are occasionally smoked but competition with the dogs, cats, and rats makes long term storage difficult. Breadfruit can be preserved for years by soaking in the lagoon, kneading and then wrapping up the resulting paste that is subsequently buried.

During the winter, or season of the northeast trade winds (*niyefang*), taro is the primary starch in the Ifaluk diet, although taro is harvested year round. Taro is harvested only by women; in fact, as noted above, men are not allowed to enter the taro patches. The two predominant species of taro consumed on Ifaluk are *Colocasia esculenta* (*wot*) and the more abundant *Cyrtosperma chamissonis* (*pulax*). Both are grown in the low woman-made swampy interior of Falalop atoll, however, most women maintain gardens of *Colocasia* at their compound (see Burrows and Spiro 1957:51-53 for details on harvesting and uses of taro).

Breadfruit replaces taro as the main starch in the diet during the peak breadfruit season around July. There is a smaller breadfruit crop which occurs in January. Breadfruit collecting is one of the few activities in which men and women interact and coordinate their labor efforts. When working together, only men climb the tall breadfruit trees, while women remain below and direct the men toward the location of the breadfruit. Women collect the fallen breadfruit and determine whether or not they are ripe.

Coconut collecting is entirely the domain of males. As throughout the Pacific, the palm tree seemingly has unlimited uses on Ifaluk. With regard to subsistence, copra is often eaten raw or cooked with breadfruit or taro. Additionally, palm sap is collected daily for the children, and when permitted by the chiefs is fermented and consumed as an alcoholic beverage by the men. Sap is collected by cutting a flower stalk and tying a carved-out coconut shell to the end of the branch. Men cut their palm trees 2-3 times each day to stimulate the flow of the sap. If a tree remains uncut for a day, it takes several months for the tree to regain a constant flow of sap. Data from Falalop atoll show that each man cuts between 2-14 palm trees for sap daily. During the 1994-1995 field session, palm sap was shared communally twice within each village on Falalop. During these events, referred to as a *luish* in Woleaian, men bring one bottle of palm sap to a specified compound where it is boiled for preservation. Each day men bring their bottle

to a different compound until all of the compounds in the village have received palm sap. The preserved sap, which has the consistency of maple syrup, is often cooked with breadfruit or taro.

### *FISHING*

Fishing is the primary means of protein-lipid acquisition on Ifaluk. Only males participate in fishing activities. Fishing techniques are seasonally dependent, and here I focus on the techniques observed during the trade-wind season (October-May). Detailed data on fishing activities were collected during 114 observation days during the 1994-95 field session. For details on data collection methods see Sosis et al. 1998; Sosis 2000a,b, 2001, 2002.

#### *Morning Trolling*

Most mornings (72%;  $n = 114$  observation days) before dawn during the trade wind season, males congregate at the central canoe hut on Falalop to prepare for morning trolling. Men spend about one half hour preparing their fishing lines and loading the mast and fishing equipment onto the canoe. After the canoes are prepared, all the men who are present help to push each canoe that will be sailing that morning into the lagoon. On average canoes depart at 4:56 a.m. (range 3:24-5:58 a.m.,  $n = 183$ ). Fishers paddle through the lagoon toward a break in the reef, where they raise their sail and enter the open waters. Once they are beyond the reef, fishers watch the foraging behavior of birds to determine where schools of fish are located. Men troll primarily for yellowfin tuna, which accounted for 89% of the trolling harvest by weight during the observation period ( $n = 114$  days). On average, canoes return at 7:53 a.m. (range 6:50-11:43 a.m.,  $n = 183$ ). Morning trolling accounts for 87.7% by weight of all fish caught during the observation period.

There are four large sailing canoes on Falalop, the atoll where fishing data were collected. During roughly 70% of the observations, four or five adult males sailed on a canoe (range 2–7;  $n = 183$ ). Each canoe is owned and maintained by a specific matriline, and hence compound. Each compound is historically associated with a particular canoe and males are expected to fish on the canoe that is associated with the compound in which they were raised, their *natal compound*. Indeed, 86.4% ( $n = 815$ ) of the observed time that males fished they sailed on the canoe that was associated with their natal compound. Although residence patterns are matrilineal, married men fished on the canoe associated with their wife's compound only 5.6% ( $n = 177$ ) of the times they fished. Despite the consistency with which men adhere to cultural expectations, these rules appear flexible, especially when there are not enough men to sail a particular canoe.

Upon return from morning trolling, fishermen from each canoe throw their catch into a communal pile that is distributed after all the canoes return. On Falalop atoll, two men have the inherited responsibility of dividing the fish. The dividers determine the type of distribution and the amount of fish that is allocated to each recipient. During the 1994-1995 field session, I observed five patterns of fish distribution following morning trolling events on Falalop atoll. Multiple distribution types were often observed at the same distribution event. The five types are:

1. Canoe owner distribution (*shuliwa*): During a canoe owner distribution, compounds that own canoes receive the catch of their canoe. A canoe owning compound that receives fish subsequently redistributes the fish to other compounds, unless the catch is particularly small. Canoe owning compounds retained an average of 59.7% (s.d. = 25.0%;  $n = 24$ ) of the fish they produced. Redistributed fish are generally directed toward compounds where kin and men who fished on the canoe reside (Sosis 2000a).

2. Village-level *ilet* distribution (*felang*): Villages on Ifaluk are composed of plots of land that are owned by the matriline of particular compounds. Plots of land each have an *ilet* value, which affects the flow of food resources contributed and received by the owners of the land (see Land Tenure above). Plots are valued at 1 *ilet*, with the exception of two plots which are valued at 2 *ilet*. Ownership of land within a village is not restricted to compounds located in the village. Indeed, several compounds on Falachig atoll own land (and hence maintain *ilet*) within villages on Falalop atoll. On Falalop, compounds possess between one and three plots of land, and the total *ilet* maintained by compounds is also between one and three. There are 19 *ilet* in Iyeur (representing 184 residents) and 11 *ilet* in Iyefang (representing 135 residents). On Falalop, the number of *ilet* owned by a compound is positively correlated with the number of residents in the compound ( $r = .72, p = .008$ ).

During a village-level *ilet* distribution, fish are divided into two piles, one for Iyeur village and one for Iyefang village. From these piles each compound receives an amount of fish proportional to the number of *ilet* it possesses. The pile of fish for Iyeur village was typically slightly larger, but not proportional to the greater number of *ilet* or the greater number of residents represented by the *ilet* of Iyeur ( $n = 17$  events, Iyeur mean = 69 kg, Iyefang mean = 63 kg).<sup>3</sup> One or two women from each compound that owns *ilet* within the village convene at their respective piles to cook and redistribute the fish. The eldest women present are in charge of the redistribution. The amount of fish that each compound receives is ideally determined by the number of *ilet* that a compound possesses. Compounds that have 1 *ilet* expect to receive half as much fish from a redistribution as compounds that have 2 *ilet*, and one third as much fish as compounds that have 3 *ilet*. For example, if a compound owns 2 *ilet* in Iyeur village, the compound expects to receive 2/19 of the total amount of fish received by Iyeur village. The

amount of fish that compounds actually receive from observed village-level *ilet* distributions closely matches the amount of fish that compounds are expected to receive (Sosis 2000a).

3. Atoll-level *ilet* distribution (*metalilet*): Similar to a village-level *ilet* distribution, in an atoll-level *ilet* distribution fish are distributed according to *ilet*. However, during an atoll-level *ilet* distribution fish are distributed directly from the canoe house to the compounds. Therefore, if as above a compound owns 2 *ilet* in Iyeur, the compound will receive  $2/(19+11)$  or 1/15 of the total catch distributed via an atoll-level *ilet* distribution. Since Iyeur does not receive fish during a village-level *ilet* distribution proportional to the number of *ilet* in Iyeur (Iyeur on average receives 52.3% of the fish [ $n = 17$ ] but maintains 63.3% of the *ilet*), compounds that have *ilet* located in Iyeur receive a greater proportion of the total catch during an atoll-level *ilet* distribution than during a village-level *ilet* distribution, whereas the converse is true of compounds that possess *ilet* in Iyefang village.

4. Fishermen distribution (*gagolagol*): Fish are distributed directly to males who fished on the canoe that caught the fish. Fish are subsequently cooked and consumed by the residential compound of the fisherman. Fishermen distributions apparently take two forms. In the first type, fish are divided equally amongst all of the crew members (egalitarian distribution). In the second type, fish are distributed separately to any residents of Falachig that participated in the fishing event (Falachig resident distribution).

5. Men's feast (*yafiileo/giubul*): Fish are cooked at the men's house and eaten by any male over 14 years old who desires to eat.

These distribution patterns can be classified as primary and secondary distribution types. The primary distribution types (canoe owner, village-level *ilet*, and atoll-level *ilet*) never co-occur, and nearly all distributions include one of these distribution types. The secondary

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<sup>3</sup> On average Iyeur received 9.5% more fish than Iyefang during village-level *ilet* distributions,

distribution types (men's feast and fishermen distribution) generally occur in conjunction with one of the primary distribution types or with the other secondary distribution type. The most frequently observed distribution type was the canoe-owner distribution, which occurred during 63.1% of all distribution events. The primary distribution types account for more than 90% of the total fish distributed. Canoe-owner and village-level *ilet* distributions were clearly the most important distribution types observed. Together these distributions account for 80.9% of the total fish distributed and occur during 89.2% of all fish distributions. Further discussion, data, and analyses on fish distribution following morning trolling can be found in Sosis 2000a, 2001, 2004.

### *9-Mile Reef Fishing*

Men occasionally fish at a reef located nine miles west of Ifaluk, appropriately known as 9-mile reef.<sup>4</sup> Men travel on the large sailing canoes and thus require strong winds to reach the reef. Preparations for the journey are similar to preparations for morning trolling. Once at 9-mile reef, men troll for yellowfin tuna, although if the conditions upon arrival are not appropriate for trolling they also pursue reef fish. To reach 9-mile reef before dawn, men depart on their 5-7-hour voyage at about 10:00 in the evening and return around mid-afternoon the following day. The long journey is made even more difficult by certain taboos, such as the prohibition on eating and drinking during the entire fishing trip. While the men are fishing, women prepare bowls of breadfruit and taro for an atoll-wide feast, which occurs when the men return. The returns from the two 9-mile reef fishing events that occurred during the sample period account for less than 1% of all fish harvested.

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but maintains 72.7% more *ilet* than Iyefang and the *ilet* represent 36.3% more residents ( $n = 17$ ).

<sup>4</sup> Nine-mile reef was known as *Fes* in Woleaian (cf. Burrows and Spiro 1957).

### *Torch Fishing*

In addition to morning trolling and 9-mile reef fishing, men also use large sailing canoes to torch fish for dogtoothed tuna. Torch fishing occurs in two stages. First, torch fishers catch flying fish in small hand nets roughly 2 ft. in diameter. Men use torches made from dried coconut fronds to attract the flying fish to the sailing canoe. In the second stage, the flying fish are used as bait for deepwater trolling to catch large dogtoothed tuna [80% by weight of all fish caught torch fishing were dogtoothed tuna ( $n = 114$  observation days)]. Flying fish caught on the first four days of torch fishing, however, are not used as bait but simply eaten.

Torch fishing is the most ritualized fishing method on Ifaluk. Men must prepare for several weeks before they can torch fish. Preparations primarily consist of collecting and drying coconut fronds that they will wrap tightly together and use as torches. Around the time of each new moon, the magician<sup>5</sup> determines whether the cycle of the moon is favorable for torch fishing. If it is deemed propitious, those canoes that are prepared may fish. The first evening that a canoe is allowed to torch fish during a cycle is referred to as an *entry day*. Only males that fish on the entry day may fish for the remainder of the moon's cycle. Males who do not fish on the entry day must wait until the following cycle to participate.

In the late afternoon of a day men expect to torch fish, the leaders of the canoe (the captain and elders of the matriline that owns the canoe) consult with the magician to determine the most promising location to fish. When the sun sets the men depart on their sailing canoes in ritualized fashion. First, a fire is set on the beach. The canoes that will sail are pushed into the lagoon and the men carry the torches through a shallow area of the lagoon to the sailing canoe in a single file

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<sup>5</sup> See Burrows and Spiro (1957) for an excellent description of the role of the magician in Ifaluk society.

line (mean = 7:02 p.m., range 6:05-9:05 p.m.,  $n = 17$ ). Women and children often spend the early part of the evening on the shore watching the canoes. The light of the flames against the large white sails in the open sea is a spectacular site. The canoes return (mean = 12:04 a.m., range 9:10 p.m.-2:06 a.m.,  $n = 17$ ) when the moon rises, thus as the month progresses men are able to fish for longer and longer each evening until a new moon appears.

During the torch fishing season, men spend most of their day making torches and hand nets at the canoe house. Food for the working men is provided by the compound which owns the canoe that will be used in the evening. There are a number of food prohibitions imposed on fishermen, such as eating bananas, taro cooked in an underground oven (*um*), and consuming any food in the afternoon. In previous generations, fishermen were forbidden to enter their households during torch fishing season, and thus they lived entirely at the canoe house.

After the first night of fishing, all of the men who fished that evening are expected to be at the canoe house at dusk for the duration of the moon's cycle. At the canoe house it is decided who will fish that evening. Those men who will not be fishing that evening help to push the canoe into the lagoon and carry the torches out to the canoe. Informants claimed that a minimum of six men were needed to torch fish but that eight was the ideal number: 4 men to hold the fishing nets, 1 man to hold the torch, 1 man to steer the canoe, and ideally 2 additional men to move the sail. Data on the number of men per canoe indicate that canoes never sailed with less than six fishermen, and on only three occasions canoes sailed with more than eight men (Sosis 2002). Two of these three occasions were entry days, when it is necessary to include everyone who has participated in preparations so that they will be allowed to fish in the following weeks. For example, on the first evening of the torch fishing season 14 men crowded into one canoe.

During the 1995 trade wind season, torch fishing began in February and ended in March. In the first cycle of the moon only one canoe fished and they were joined by another canoe during

the second cycle. Over this two month period there were 13 evenings in which men torch fished. The amount of effort that was invested in torch fishing preparation, by men and women, was extraordinary, especially when the caloric returns on investment are considered.

Torch fishing accounts for less than 5% of the total amount of fish caught during the observation period (Sosis 2001). Torch fishing harvests are the property of the compound (matriline) that owns the canoe on which the fish were caught. The canoe-owning compound subsequently redistributes fish to the fishermen who do not reside in the compound, although most of the fish remain within the canoe-owning compound (Sosis 2001). Apparently, in previous years fish caught during torch fishing events were more widely distributed throughout the atoll. In 1995, the chiefs of the compounds that owned the canoes that torch fished decided not to widely share the fish, since other compounds had not contributed food to the men during the weeks of preparation.

### *Rope Fishing*

On two occasions during the 1994-95 field session the men of Falalop rope fished (*rop*). Rope fishing is an atoll wide event, that is, all men who reside on the atoll are expected to participate. During rope fishing, two ropes that are each over 50 meters are used to catch reef fish. Preparations take roughly two hours and commence after the men complete their morning rounds of cutting palm sap. The preparations mainly consist of collecting coconut fronds which are then tied to the long ropes. The elders of the community lead the fishing party in two or three middle-sized paddling canoes. The rest of the men travel to the fishing site on 25-30 individual paddling canoes. Once the fishing site along the reef is reached, the elders organize all of the canoes into a circle. The two ropes are tied together and passed along to each of the canoes. A fishing net is secured in the center of the circle. Most of the men proceed into the

water, while a few remain above to keep an eye on the canoes. Wearing diving masks, men place the rope on the ocean floor and swimming slowly and in synchrony, move the rope toward the fishing net. The coconut frond covered rope is intended to frighten and hence drive the fish toward the net. When the circle created by the men becomes small, the men scream and splash making a great commotion to chase the fish into the net. The nets are then emptied into the canoes of the elders. This process is repeated 4-5 times at different locations along the reef. The fish are then placed in a communal pile and divided amongst the residents of the atoll. During both rope fishing events I noticed several men catching fish that they did not contribute to the communal pile. The returns from the rope fishing events that occurred during the observation period account for only 3.3% of the fish harvested during this time. The two observed rope fishing events occurred from 11:00 a.m.-1:45 p.m. and 10:40 a.m.-3:01 p.m.

Following rope fishing events, the catch was separated into three piles according to size and distributed via the *ilet* distribution system. In addition to *ilet*, fish were also distributed according to “high places,” referred to as *sharug* in Woleaian. Although informants claimed that *sharug* is not limited to rope fishing, I have not observed it in any other food distributions. The land of each village is ranked hierarchically. The three highest ranking plots of land in each village are referred to as “high places” (see Sosis 1997 for names). During both rope fishing events I observed, the high places were given additional fish according to their rank. For example, in one event the compounds that owned the two highest ranking plots of land each received four extra fish, the owners of the second ranking plots of land received three extra fish, and the owners of the third ranking plots of land received two extra fish. Similar to *ilet* contributions, the residents of high places are expected to contribute more rope when the long rope or fishing net used in rope fishing are made. For instance, if compounds are told to contribute six fathoms of rope, the owners of the highest ranking land must contribute ten

fathoms, and the owners of the second and third ranking plots of land must contribute nine and eight fathoms of rope respectively.

### *Solitary Fishing*

All solitary fishing methods exploit reef fish in Ifaluk's lagoon. During the observation period, solitary fishing resulted in the capture of 62 different species of reef fish. The main type of solitary fishing during the trade wind season is line-fishing, with octopus and land crabs most frequently used as bait. Almost all males over 15 years old own the solitary outrigger canoes used for line-fishing. Spear and trap fishing were also observed during the trade wind season (see Burrows and Spiro 1957 for a description). During the observation period, only 15 of 45 males who stored their outrigger canoes on Falalop engaged in any form of solitary fishing, and their returns account for only 2.2% of the fish caught during this period.<sup>6</sup> None of the solitary fishing methods consist of randomly searching the entire lagoon for fish. Men know where certain species of reef fish are located and they prepare the appropriate bait, hooks, traps, or nets before fishing in each location. Men begin solitary fishing in the morning or early afternoon (mean=12:31 p.m., range 8:59 a.m. – 3:10 p.m.,  $n = 54$ ) and typically return throughout the late morning and afternoon (mean=2:50 p.m., range 10:43 a.m. – 5:48 p.m.,  $n = 54$ ). Solitary line fishing with bait was the main type of fishing (solitary or cooperative) during the season of calm winds (*lecheg*) from May to October.

Fish acquired by solitary means are the property of the fisherman. Some of the reef fish that men catch are taboo for women to eat. Often, when these species are caught the fisherman

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<sup>6</sup> These data refer to daytime solitary fishing. I did not collect systematic data on nighttime solitary fishing activities. However, casual discussions about solitary fishing indicate that 1) nighttime solitary fishing occurred less frequently than daytime solitary fishing, and 2) no individual exclusively fished at night.

will build a fire and cook the fish on the shore and invite any male over 14 years of age to join him in a small feast. Eleven of the 62 species caught during the observation period were taboo for women to eat, constituting 17.0% of the total weight of all solitarily acquired fish. An average of 76.8% (s.d. = 31.0%;  $n = 35$ ) of fish caught by solitary means was consumed by the fisherman and his residential compound. During 19 of 35 observed sharing events, there was no sharing outside of the fisherman's residential compound.

For more detailed information, quantitative data, and analyses on distribution patterns, determinants of fishing participation, and patch choice decisions see Sosis et al. 1998, Sosis 2000a, 2000b, 2001, 2002, 2004.

## **CONCLUSIONS**

Here I present a snapshot of life on Ifaluk in the 1990s. As in all societies, life on Ifaluk is changing. Nevertheless, owing to its isolation and sufficient resources to maintain traditional subsistence patterns, change remains slow. The current high chief is also responsible for fostering an environment in which traditional life ways can be sustained. It is not clear whether his successor will be capable of continuing his firm policies that prohibit Western cultural encroachment. As the current generation of elders passes, medicinal, magical, and technological knowledge will all be lost. Fishing remains the central activity of males, but even these skills have diminished as youth spend their childhood in the classroom rather than in the canoe (Sosis et al. 1998). The people of Ifaluk recognize that change is inevitable, and some welcome it. What remains uncertain is whether change can continue gradually, and how the people of Ifaluk will cope if it does not.

**REFERENCES**

- Alkire, W. (1974). Land tenure in the Woleai. In *Land Tenure in Oceania*, eds. Lundsgaarde, HP, pp. 39-69. Honolulu: University of Hawaii Press.
- Bates, M, and Abbott, D. (1958). *Coral Island: portrait of an atoll*. New York: Charles Scribner's Sons.
- Burrows, E. and Spiro, M. (1957). *An Atoll Culture: Ethnography of Ifaluk in the Central Carolines*. Westport, Ct.: Greenwood Press.
- Freeman, OW, Ed. (1951). *Geography of the Pacific*, New York: John Wiley and Sons.
- Lessa, W. (1964). The social effects of Typhoon Ophelia (1960) on Ulithi. In *peoples and Culture of the Pacific*, A. Vayda (Eds.), pp. 330-379. New York: Natural History Press.
- Levin, M. (1976). *Eauripik Population Structure*. Ph.D., University of Michigan.
- Lutz, C. (1988). *Unnatural Emotions*. Chicago: University of Chicago Press.
- Marshall, M. (1979). *Weekend Warriors: Alcohol in a Micronesian Culture*. Palo Alto: Mayfield Publishing Co.
- Turke, P. (1985) *Fertility Determinants on Ifaluk and Yap: Tests of Economic and Darwinian Hypotheses*. Ph.D., Northwestern University.
- Sohn, H. (1975). *Woleaian Reference Grammar*. Honolulu: The University Press of Hawaii.
- Sohn, H., & Tawerilmang, A. (1976). *Woleaian-English Dictionary*. Honolulu: The University Press of Hawaii.
- Sosis, R. (1997). *The Collective Action Problem of Male Cooperative Labor on Ifaluk Atoll*. Ph.D., University of New Mexico.
- Sosis, R. (2000a). The emergence and stability of cooperative fishing on Ifaluk Atoll. In *Human Behavior and Adaptation: an Anthropological Perspective*. L. Cronk, N. Chagnon, and B. Irons, eds. Pp. 237-272 . New York: Aldine de Gruyter.
- Sosis, R. (2000b). Costly signaling and torch fishing on Ifaluk Atoll. *Evolution and Human Behavior*, 21:223-244.
- Sosis, R. (2001). Sharing, consumption, and patch choice on Ifaluk Atoll: evaluating an explanatory hypothesis of why Ifaluk men torch fish. *Human Nature*, 12:221-245.
- Sosis, R. (2002). Patch choice decisions among Ifaluk fishers *American Anthropologist*, 104: 583-598.

- Sosis, R. (2004). Insights from Ifaluk: food sharing among cooperative fishers. *Behavioral and Brain Sciences*, 27:568-569.
- Sosis, R., S. Feldstein, and K. Hill (1998). Bargaining theory and cooperative fishing participation on Ifaluk Atoll. *Human Nature*, 9:163-203.
- Spiro, M. (1952). Ghosts, Ifaluk, and teleological functionalism. *Journal of American Folklore*, 64:289-96.
- Tracey, J, Abbott, D, and Arnow, T. (1961). *Natural History of Ifaluk Atoll*. Honolulu: University of Hawaii Press.