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Kolen, Judith; de Smet, Eline; de Theije, M.E.M.

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“We are all Garimpeiros:” Settlement and Movement in Communities of the Tapajós Small-Scale Gold Mining Reserve

By

Judith Kolen

CENTRE FOR LATIN AMERICAN RESEARCH AND DOCUMENTATION
(CEDLA)

Eline de Smet

CEDLA

Marjo de Theije

VU UNIVERSITY/CEDLA

R E S U M E N

Este artigo aborda o papel da mineração de ouro em pequena escala na urbanização da Amazônia brasileira, enfocando os processos locais em dois assentamentos de mineração na Província Aurífera Tapajós. Nossa análise revela três tendências na mudança de mobilidade para permanência. Em primeiro lugar, evidencia-se que, ao longo dos anos, os assentamentos de mineração irregulares cresceram em aldeias formalizadas. Mobilidade e permanências temporais, características tradicionais de mineração de ouro em pequena escala, gradualmente, dá lugar a estadias mais longas em assentamentos de mineração. Fatores cruciais, identificados nesse processo, são a presença de representação do governo e de infra-estrutura material. Em segundo lugar, essa transição de assentamentos de forma irregular e provisória para uma condição mais estável e formalizado não é um processo unilateral. Este processo está tomando forma através da sinergia das iniciativas locais e informais e um governo local e federal, entendido nesta pesquisa no sentido passivo-reativo. Em terceiro lugar, a permanência é em grande medida construída com a manutenção de uma “comunidade garimpeira” através de ligações com centros urbanos regionais. [Amazonia, Brasil, desenvolvimento, geografia, migração, mineração, urbanização]

A B S T R A C T

Scholars have been carrying out research into the urbanization of the Brazilian Amazon since the 1960s. This article addresses the role of small-scale gold mining in urbanization, by focusing on local processes in two mining settlements in the Tapajós Mineral Province: Creporizão and Creporizinho. This analysis addresses why mobility and temporary settlement, which are traditional characteristics of small-scale gold mining, are gradually giving way to longer stays in these mining settlements. Over the years, irregular mining settlements have evolved into formalized villages. These settlements attract increasing numbers of families and service providers. This transition from an irregular and provisional settlement to a more stable and formalized one is not a unilateral process, but takes shape through the interaction of local and informal initiatives and passive-reactive local and federal governments. In addition, settlement permanence is to a large extent constructed around the notion of a “garimpeiro community” in which small-scale gold mining lies at the root of a collectively formed identity. In these villages, links with regional urban centers such as Santarém and Itaituba remain strong. In the context of urban development in the region, Creporizão and Creporizinho can still be seen as mining villages, where settlement remains a strategic choice and a stage in the life trajectory of its inhabitants. [Amazon, Brazil, development, geography, migration, urbanization]

“I still plan to leave the goldmines. But I don’t know if it will work out . . . It is a thought that keeps coming back. The money is difficult. The gold is difficult.”
Felipe, 47, pit worker, Tapajós¹

WHEN FELIPE WAS TWENTY-FIVE, HE LEFT HIS BIRTHPLACE in Ceará to investigate rumors of gold. He intended to earn his money and then go back home, but he has never returned. Once deep in the Brazilian Amazon and part of the gold mining world, many miners stay longer than planned, and slowly lose the connection with their families and lives back home. Many consider it humiliating to return home without sufficient money, and they continue to work in the *garimpo* (mining camp), often because they have nowhere else to go, or because there is no other job they can do. Further, the “easy gold” is long gone: the dreamed-of opportunity to get rich quick has become rare, while their temporary stay in the mining region has become permanent.

Felipe lives in a camp next to a mining pit in Canaã. He likes to spend his leisure time in Creporizão, a *currutela* (small service center) with shops, bars, and brothels that cater to miners. To get there, Felipe spends four hours on a boat. He has seen changes taking place: in the 1980s Creporizão was a bustling



Figure 1 Map of Tapajós, showing the key places mentioned in the text.
 Source: UvA Kaartenmaker (2016).

location—some called it dangerous. People carried weapons to protect themselves from robbers. Nowadays, it is different. People continue to move in and out of the area, but there is a growing group of people—single men like Felipe, as well as couples with children—who have chosen to live here, either permanently or semipermanently (Fig. 1).

Creporizão lies at the end of the Transgarimpeira, a 192-kilometer dirt road that crosses the Tapajós gold mining reserve in the southwest of the state of Pará. Thirty-seven kilometers to the east, it passes the village of Creporzinho. Both settlements started as mining camps established after the discovery of gold in the 1950s, when large numbers of *garimpeiros* (small-scale goldminers) came to the region. Creporzinho was founded in 1962 (Villas-Bôas 2003:2), long before the construction of the road, but shortly after the discovery in Tapajós of

one of the world's most important gold deposits (da Silva 2001:32). The establishment of Creporizão, however, can be directly linked to the Transgarimpeira: according to community members, it was founded in 1986, the year the road was completed. The end of the Transgarimpeira at Creporizão strategically coincides with a landing place on the bank of the Crepori river, which became the destination for the many migrants who came to try their luck in the small-scale gold mining business. The developments these villages went through are typical of Tapajós, where numerous temporary mining camps have evolved into *currutelas*, and eventually into villages and districts where settlement is becoming increasingly permanent.

The Brazilian Amazon is known throughout the world for its tropical rain forest and high level of biodiversity. This frontier region, however, is also characterized by high rates of population growth and urbanization. The Brazilian North Region became predominantly urbanized during the 1970s (Browder and Godfrey 1997:2). Hundreds of towns sprang up in the following decade. According to the national census (Instituto Brasileiro de Geografia e Estatística [IBGE] 2010), the region's population grew from roughly 2.5 million in 1960, to 15.9 million in 2010; of these people, 73.5 percent live in urban areas.² This urbanization trend inspired geographer Bertha Becker (2005:73) to describe the Amazon as an "urbanized forest," sparking an urbanization debate among scholars. It has since been argued that the statistics do not do justice to the complex nature of movement and settlement here. Instead, we need to look at the region's multifaceted and intertwined social processes and developments (Browder and Godfrey 1997; Castro 2009; Cleary 1993; Godfrey 1992).

More recent work has focused on the movement of rural and urban populations. A change in the migration pattern has been observed, from movement between regions and into the Amazon, to circulation within the region (Costa and Brondizio 2009; Padoch et al. 2008; Perz et al. 2010). Within the Amazon, population movement is not confined to migration to the city; rather, people move back and forth between the city and the countryside. The concepts of urban and rural are blurred in the Amazonian heterogeneous social space, and many households are "multisited," "multilocal," or dispersed (Padoch et al. 2008).

Small-scale gold mining constitutes a significant and dynamic part of this social space, as it provides thousands of people with a livelihood. The sector is often characterized by temporality, irregular local patterns, and strong external linkages. Small-scale gold mining is traditionally associated with gold rushes—masses of people following rumors about where gold is to be found. Temporary mining camps with small generators are set up in the forest, close to the mining pit. If the gold or the profit is not as expected, people leave again. It has therefore long been assumed that gold mining activities have no significant effect

on the regional settlement structure, except for their environmental degradation footprint.

This traditional view is challenged by the numerous *currutelas* that have gradually evolved from small, violent places predominantly populated by men into villages where families settle. Some miners have second wives or families in the mining village or in a nearby larger urban center such as Itaituba or Novo Progresso. There are also second-generation miners with a mother and/or father in the gold mining business. There are new migrants as well: young men and women who travel to the mining areas in search of “busy” places with economic opportunities for whom mining is a temporary strategic choice. Many of these youngsters might at some stage move on to other working places or return home, but some remain in the villages. Permanent settlement is made easier by a growing number of facilities, such as schools, pharmacies, and police stations. Although informal arrangements predominate, they are gradually being replaced by formal schemes. The village inhabitants mediate between formal and informal roles.

Browder and Godfrey (1997) were among the first to acknowledge the influence of small-scale gold mining on urbanization in the Amazon, stating that the sector gives “a dynamic but essentially irregular and regionally disarticulated aspect” to urbanization in this region (1997:343–344). More recently, Wanderley (2015) showed the historical and contemporary impact of mining on urban expansion in the region. The importance of mining for movement and settlement in frontier areas is not limited to Brazil. In a study of small-scale gold mining in Zimbabwe, Bryceson and MacKinnon argued that the sector spurs “an indirect and locationally deflected urbanization” (2012:530). Anthropological studies of small-scale gold mining in the Amazon are rare.³ Studies on specific mining-related urbanization provide valuable insights into processes of mobility and settlement, in which aspects of temporality and informality create important dynamics, although little work is available on the Brazilian Amazon. A recent PhD thesis by Leticia Tedesco (2015) is a notable exception, as is the work of André Dumans Guedes (2013, 2014), who developed the notion of movement and the lack thereof in relation to small-scale mining. By offering a local perspective on mining settlements in the Tapajós region, this article contributes to wider understandings of movement and settlement patterns in the Brazilian Amazon.

Below, we provide a brief history of gold mining in the Tapajós region, presenting the most relevant state interventions in small-scale gold mining in Brazil. Over the years, the absence of the state from Tapajós has led to the development of an informal regulatory framework for the exploration and exploitation of mineral resources (de Theije et al. 2014). As outlined in the following sections, this informal regulatory framework also defines the constitution of the mining communities today.

Our analysis reveals three trends in the process of change from mobility to settlement. First, over the years, some mining settlements have evolved into formalized villages, and these have become increasingly inhabited by families and service providers. Crucial factors in the process are the discovery of new gold deposits and resultant “gold rushes,” growing government representation, and the provision of public services, such as schools and health posts. Second, this transition from irregular and provisional to more stable and formalized is not a unilateral process. Developments are set in motion through synergy and conflict between local and informal initiatives and a passive–reactive government. Third, permanence is largely constructed around the notion of a “garimpeiro community” where small-scale gold mining is the root of a collectively formed identity. In these villages, links with regional urban centers such as Santarém and Itaituba remain strong. In the context of urban development in the region, Creporizão and Creporizinho are still mining villages, where settlement remains a strategic choice and a stage in the life trajectory of its inhabitants, either in actual practice or in their perception of it.

Small-Scale Gold Mining and State Intervention in Tapajós

Tapajós is the largest small-scale gold mining region in Brazil. It covers approximately 100 thousand square kilometers and holds one of the world’s most important gold deposits. The discovery of gold in 1958 led to the first gold rush (da Silva 2001:33). Because the region was densely forested and had few roads, the first garimpeiros settled near navigable rivers. The gold fields were extended in the 1960s along the Tapajós River, near the town of Itaituba (Larreta 2002:14–15). In 1979, the rise in the price of gold sparked a second gold rush, leading to hundreds of thousands of people migrating to the region in the following decade. The introduction of the suction dredge technique around the same time allowed the mining of deposits from riverbeds, and thousands of miners worked the alluvial gold deposits along riverbanks and in the rivers and creeks (Cleary 1990). Since then, small-scale gold mining has been the most important economic sector in the Tapajós.

The rapid growth of the population of the main settlement in the region—the “hub” town, Itaituba—demonstrates the impact of small-scale gold mining on urbanization. The population of Itaituba grew from 653 to 2,000 between 1950 and 1970, and to 8,000 in 1974 with the impact of the Transamazon Highway. By 1981, an estimated 40,000 people lived in Itaituba. Businesses diversified and Itaituba developed into a commerce town and service center for the region’s gold mining fields (Schmink and Wood 1992:84–85).

Small-scale gold mining peaked in the 1980s, when more than 100,000 garimpeiros worked in the region (Araújo et al. 2008:40). Due to the lack of roads or good waterway infrastructure, aircraft became the most important transport medium. The miners soon built hundreds of landing strips all over Tapajós, giving access to single-engine planes. Transport was expensive, however, so the miners stayed for long periods of time “in the garimpo,” without going back to their homes in other parts of Brazil. Goldminers lived in camps near the digging areas, around which communities formed; these became home to tradesmen, cooks, sex workers, and other service providers. The first settlements to develop were the *currutelas*—local service centers with brothels, bars, and small shops. If the mining operations were successful, these small settlements developed into busy places. For example, in Cuiú-Cuiú, one of the oldest *currutelas* in Tapajós, planes came and went every day, from the small airstrip in the heart of the village. In its heyday in the early 1990s, there were 32 brothels here (Tedesco 2015:307).

Some *currutelas*, such as Caracol, São Chico, and Jardim do Ouro, developed into villages where everyone made a living from gold mining: some produced mining equipment, some were mechanics who repaired the machines, and some were buyers of contraband gold. Such developments also fostered the emergence of new economic elites. Some owners of mining camps used their wealth and influence here to become entrepreneurs in other realms of the local economy and politics (Cleary 1990:93; Schmink and Wood 1992:84–85). A few became important figures with many stories attached to their names, such as Zé Arara who sometimes took his private plane to São Paulo just for lunch; we heard of him many times in the villages as well as in Itaituba. We also heard countless stories about the excesses and immense wealth of the big bosses of the mines during the heyday of the gold rush.

This was the situation until the 1990s, when small-scale gold production declined. Alluvial deposits became exhausted and the gold price dropped. In addition, mining was banned in indigenous areas and in areas newly designated as nature conservation units. Many small-scale goldminers left the region; some continued mining in, for example, Suriname or French Guiana, while others took up alternative economic activities. Some settlements were abandoned, but many more remained inhabited, although their populations declined. Some garimpeiros who had become rich in the 1980s were now landowners and invested in other businesses, such as cattle farming.

Despite the subsequent gold rushes, the huge Tapajós region is sparsely populated, and in most of the territory the Brazilian state has no presence. Small-scale gold mining is generally an informal activity and attempts to control the sector have not been successful. The Mining Code of 1967 acknowledges it as a sector with economic possibilities that needed regulation; for example, to get permission to prospect, people must register with the municipal tax office. In 1983, the

Tapajós region was declared a Reserva Garimpeira (mining reserve)—an area for use exclusively by small-scale goldminers (Kolen et al. 2013). In 2005, however, a large part of this mining reserve was also declared a protected area for nature conservation. This did not take into account the socioeconomic reality, and should be considered a reaction to global environmental discourse. It would seem reasonable to expect the protected area status to significantly affect small-scale mining operations, but the Reserva Garimpeira was never abolished and garimpeiros continue working in the area (Baía Junior 2014). In summary, Brazilian state policy toward small-scale gold mining has been inconsistent and inefficient, sometimes treating the sector as a viable economic activity, and at other times as a sociopolitical threat (Sousa et al. 2011). In addition, it has proven difficult to enforce rules and regulations.

The economic crisis of 2008 fueled a new gold rush in all Amazon countries, as the value of gold rocketed. In 2012, an estimated 200,000 garimpeiros were mining gold in Brazil (Kolen et al. 2013:34). Old deposits that had been declared exhausted turned out to be profitable again, despite the low gold percentages in the remaining primary material. Also, working with more machinery means that much more soil can be processed over the same amount of time. Life in the old *currutelas* revived and population numbers increased again. Since then, miners in Creporizão and Creporizinho have started working sites that had been exploited then abandoned, looking for deposits that could be mined with the new technologies. Another recent development in Tapajós is that mine owners are willing to negotiate with prospecting firms and mining companies. Such negotiations sometimes lead to access to land for prospecting, in return for a share of the expected profits. In other cases, people sell their mining rights to firms. Several medium-scale prospecting and mining enterprises have emerged in the region over the last ten years. These medium-scale companies provide many people with steady jobs and regular wages, and the presence of such businesses has changed the forms of employment and work relations in the region.

Creporizão and Creporizinho: From Currutela to Village

The small-scale gold mining boom–bust cycle in Tapajós has influenced settlement patterns in the region. Here, we highlight some trends in Creporizão and Creporizinho that support our argument that such villages gradually evolve from temporary dwellings with changing populations, into villages of regional importance with permanent residents (see Figure 2).

The construction of the Transgarimpeira turned the original mining camp of Mundico Coelho into the busy settlement of Creporizão, which later became a district seat. The Transgarimpeira was constructed by the federal government

in 1984–1986 to facilitate the flow of gold from the Tapajós River basin (Baía Junior 2014:101). It was funded by Caixa Econômica Federal—a savings bank that had a monopoly on buying the garimpeiros’ gold (Monteiro et al. 2010:145). The Transgarimpeira runs roughly west from the BR-163 Highway at Moraes de Almeida, to the Creporí river. From here, supplies bought in bigger places such as Itaituba and Novo Progresso are transported deeper into the Tapajós mining region to sites that are accessible only by boat along the Creporí and Marupá rivers. On most days, big-wheeled trucks deliver food, gasoline, machinery, beauty products, and other goods. The red mud on the wheels and bodies of the trucks hints at the challenging driving conditions along this dirt road. In the wet seasons, it can take a whole day to drive from one end of the road to the other. Aircraft remain an important transport medium here, but they no longer monopolize access to mining sites. Several thousand people are said to be living in Creporizão today.

Creporizinho was already important before the arrival of the Transgarimpeira. Since Senhor Lourival Rodrigues de Lemos built an airstrip there in 1974 (Mathis 2003:29), thousands of garimpeiros have arrived to work the rich gold deposits of the region. In its heyday in the 1980s, an estimated 10,000 people lived in Creporizinho and its surrounding work sites (Mathis 2003:29).⁴ Yet, it would



Figure 2 Aerial view of Creporizão and the Creporí river.

[This figure appears in color in the online issue]

Source: photograph by Judith Kolen, March 2012.

have been a different place today had the road not been built. Creporizinho would probably have turned into a ghost town in the 1990s when gold production declined drastically. In 2003, the population had declined to an estimated 600 people living in the village itself (Mathis 2003). Our estimate is that the number has now increased to roughly 1,000 inhabitants.⁵ In 2012, a team of researchers administered sixty-eight household surveys: the same questionnaire had been used for the large social study of Creporizinho of the Global Mercury Project in 2003. The data obtained by the two surveys show how households' characteristics have changed over time (Kolen and Mathis 2013): people continued to migrate to and from Creporizinho, but not in such large numbers compared to 2003. Time of residency in the village is increasing and most of Creporizinho's inhabitants were born in the state of Pará, in towns in the region such as Itaituba and Santarem. We found a sex ratio of almost one to one, indicating a balanced number of men and women living in the village. Several men worked at a medium-scale mining enterprise located close to the village, where gold is mined in a large open pit. They went to work every morning and returned to their families in the evening—unlike the *garimpeiros* in the small-scale gold mining sector, who usually live in camps next to the mining pit, and only travel to the *currutelas* on their free days or when the pit is exhausted. Some mining pits are much closer to *currutelas*, which means that some *garimpeiros* enjoy their free time in the *currutela* every week, while others stay in the forest for months.

Although a significant proportion of the labor force in the villages still engages in small-scale gold mining, a diversification process is noticeable. For example, many men in Creporizão are employed by a medium-scale mining enterprise. In the villages of Creporizão and Creporizinho, the working population mainly comprised shop assistants, teachers, health care workers, and other service-related professionals. In addition, investing in other production systems, such as cattle farming and logging, is a strategic choice for some mining entrepreneurs. For example, "Seu" Manuel obtained a large piece of land close to Creporizinho some years ago. To the left of his house there is a small-scale mining operation; to the right, cattle graze. "I live here with my family," he told us. "And we don't intend to leave anymore. When there is no gold left, we will still have the farm."⁶ His daughter owned a beauty parlor in Creporizão, his wife managed the farm, and he continued to be a miner. This diversification is important for the development of the region, as it will secure the future of the villages when small-scale gold mining is no longer profitable.

These personal stories suggest that Creporizão and Creporizinho gradually evolved from temporary dwellings with changing populations into villages that have regional importance and permanent populations. Because of this development, there was also a pressure for political recognition. Since their early establishment, both hamlets were officially under the jurisdiction of Itaituba, which

is one of Brazil's largest municipalities, covering an area of 62,041 square kilometers (IBGE 2013b). The capital city Itaituba is some five hundred kilometers away, which meant that Creporizão and Creporizinho were invisible in the political arena. An important landmark in the villages' founding history was the creation of Creporizão District in 1995, by Law 1793/05. It is one of four districts within the municipality, and includes the villages of Creporizão and Creporizinho, as well as smaller and more scattered work places. Creporizão now has a deputy mayor, putting the region on the political map of the municipality. The deputy mayor is a municipality spokesperson, and is elected together with the mayor, although there is little authority invested in the figurehead, as discussed below: with neither office nor staff, the mayor (since 2012) works from home, which is also the local pizzeria.

The formation of Creporizão District has given village inhabitants the right to file requests for social services and facilities with the municipal authorities. However, this does not necessarily lead to the provision of these services by governmental authorities. These processes take a lot of time and are subject to political decisions. The transition from irregular and provisional to more stable and formalized communities is thus not a unilateral process. Characteristics of temporality and informality remain evident, and become apparent when we take a closer look at the transition to formal settlements. Crucial factors in the process are the diversification of economic activities, government representation, and the material infrastructure, such as schools, health posts, and transport.

State Support and State Neglect

Before 1995, Creporizão and Creporizinho were informal settlements from which the government was absent. Since the formal acknowledgment of Creporizão as a municipal district, the government has slowly become more visible through the provision of public services. Primary health care, education, and social order are the most notable areas where the government has stepped in. Many more services have been initiated by local entrepreneurs and village groups, which have sometimes developed these initiatives into profitable businesses. Some community members carry authority because villagers depend on them for electricity or water, which sometimes leads to conflict. Initiatives by the government to take over, improve, or expand some services can be perceived as competition and are thus sometimes counteracted. The dynamic interplay between government representation and self-construction of the communities becomes apparent in the case of some of the services currently provided in Creporizão and Creporizinho.

Creporizão has a governmental health post, with a nurse and a technician contracted by the municipality. On weekdays, the nurse has daily consultation

hours and receives dozens of patients. The basics, such as penicillin and medication for diabetics, are provided free of charge. However, the nurse has neither the time nor the training to deal with more complicated cases. A doctor visits the area a few times a year, at most. Promises have been made by the mayor that a doctor will be contracted for the entire region, and that he or she will then visit specific health posts once a week or twice a month. In the meantime, people must travel 500 kilometers to Itaituba if they need to see a doctor, which is time-consuming and costly. In severe cases and emergencies, the municipality pays to fly patients to Itaituba. For each individual case, permission needs to be granted by the municipality in Itaituba; the deputy mayor has to make the call and negotiates with the municipal office. This call can only be made by satellite phone or via the Internet, since there is no mobile network in the region. If there is no budget granted, the deputy mayor will “collect money on the street”: in other words, the villagers must help to find the funding.⁷

Lack of access to good medical care means that other actors fill the gap. For example, a private orthodontist from Novo Progresso travels to Creporizinho and other villages in the region every month. At the time of our research in 2012, a dentist was building a treatment room in Creporizão. Pharmacies play an important role too; they often have more medications than the official health post. The pharmacists also have medical skills, such as the ability to diagnose illnesses, stitch and bandage wounds, and midwifery skills. Many people in Creporizão prefer to visit Dona Lúcia’s Pharmacy than go the health clinic. In fact, the health clinic itself relies on Dona Lúcia’s Pharmacy for a regular supply of needles, syringes, bandages, malaria tests, and other medical necessities. Informal private health care provision in the gold mining region has some negative consequences, however. For example, antimalarials sold in the informal private sector are often not registered and fail quality control testing. A recent study in neighboring Guyana and Suriname revealed a link between the reduced efficacy of artemisinin antimalarials, the selling of substandard malaria medicines in the private and informal sector, and misuse of these medicines by patients (Pribluda et al. 2014). There are even stories circulating of goldminers dying from an overdose of malaria pills.

Local initiatives are also aimed at the provision of electricity. In both villages, local entrepreneurs have installed generators and sell electricity to their neighbors. There is a hydroelectric facility in Creporizão, set up by a miner. Ninety-five percent of houses in Creporizinho now have access to energy (Kolen and Mathis 2013). These numbers seem promising from a developmental point of view, but the downside is that the price of electricity is high.⁸ Local power dynamics are magnified through these constructions, as the facilities are owned and controlled by a powerful economic elite. It can be difficult for others in the community to stand up to these forces and press for change or fight injustice. A resident of Creporizão, for example, told us that some local water wells are polluted with

the oil used to run the generators, but that she could not do anything about it: “So I lost my well and I’m not allowed to complain.”⁹ Power is also displayed in negotiations about state support, as illustrated by the struggles around the “Light for All” program of the federal government. Many see benefit in participating in this program through which millions of people in remote areas have already been provided with electricity. However, the program had not reached Creporizão. Rumors were going around that the local electricity providers had prevented this development to protect their income. “This soap opera has been playing for more than ten years now. It has been promised, but so far nothing has happened,” a villager told us.¹⁰

When it comes to water, few public or entrepreneurial initiatives have been introduced in Creporizinho. It is all taken care of at the household level, on people’s own initiative and under their own responsibility. The wider availability of electricity could be why wells with electric suction pumps are the principle source of the water consumed in the villages. Our data show that all the surveyed houses have access to water. Groundwater is the principal source and an increased number of households are storing their water in tanks (from 30 percent in 2003, to 61 percent in 2012). In Creporizão, on the other hand, a local entrepreneur has constructed a piped system throughout the village, supplying 60 percent of households with water. The water is of bad quality, however, as it is collected close to a garbage dump and is not treated. People use it only for bathing, and rely on private wells for drinking and cooking water. The municipality expressed concerns about this situation and was negotiating with the water vendor to see how he might improve the quality and coverage of the water supply.

There are no wastewater treatment plants or other ways to safely dispose of human excreta. People build their own latrines and the residue is dumped in dry sewers or open waterways. Solid waste is regarded as more important in the village. Community initiatives with the participation of the deputy mayor have led to the purchase of a garbage truck, which collects the household waste on a regular basis. The garbage is dumped at an allocated site close to the village.

Urban services are thus mostly provided by local initiatives; *garimpeiro* communities are used to looking after themselves. The above examples show that although they help to solve current infrastructural limitations, they do not necessarily improve the villagers’ quality of life in the long run. Major improvements in public health and other services are yet to be achieved. In the meantime, formal authorities establish themselves in the region and mediate their role within the predominantly informal culture. In Creporizão, we heard the story of a 70-year-old *garimpeiro* who died while working on a mining raft in the river. The man had no identification documents, and no one knew who his relatives were. The recently arrived formal police of Creporizão arranged

his funeral in the same garimpo way it had always been done: “Here the police do it all! A policeman is pastor, priest, blesses marriages, does everything.”¹¹ They picked a drunkard from the street and commissioned him to carry the coffin; others helped. After the burial they drank a beer together, and village life carried on.

Garimpeiro Communities

The notion of more permanent settlement is apparent not only in the types of services that are available, but also in how people experience and construct community. Local histories reveal a sense of community in contemporary Creporizão and Creporizinho that is different from that of the stereotypical *currutelas* of earlier times or elsewhere. We heard many stories about the wild days when there was a lot of violence in the gold mining areas of Tapajós. A soldier stationed in Creporizão observed: “People say that in the past, two, three or four people died each day, everyone was armed. Now it is the opposite: when someone dies, people are surprised.”¹² According to local people, the places are calmer and “civilized”: solidarity and respect are important values. The sudden death of an inhabitant of Creporizão in March 2011 led all the villagers to close their shops and to postpone the celebration of Carnival for a week. That same year, the community was involved in festivities marking the 25th anniversary of the village of Creporizão.

The village churches play a significant role in building more stable settlements. Both Creporizão and Creporizinho have a Catholic church and several Pentecostal churches, such as the Assembly of God and Seventh-Day Adventist. These churches opened in the late 1980s and early 1990s, and for many they are an important part of social life. Some interviewees attributed the villages’ “civilization” to the presence of these churches, which provide a social network of mutual involvement and care; they are also institutional and moral authorities that demand Christian conduct. This includes the promotion of family life and sobriety, including (in the case of the Pentecostal Churches) not participating in the part of village life that involves sitting in bars and consuming alcohol. Church members adopt a lifestyle in which they “think of the future” (de Smet et al. 2012:47–48). Joining a church is therefore not part of the lifestyle of many goldminers who live in the mining camps, as they are focused on trying their luck, returning home with a lot of gold, or moving on to other garimpos, and spending their leisure time in the bars of the *currutelas*, drinking and spending time with the sex workers. This is, of course, different from miners who live with their families in the *currutelas*. Their lifestyle is more focused on stability, settlement, and the local community. Church participation encourages individuals to abandon the hustle and bustle, and to embrace communal life. The

churches also function as local authorities: independent and in the absence of the state, they have a strong network throughout the region. Through the churches' character of self-organization, they might be more successful in effectuating a stable social climate than political decision makers in Itaituba or further away. There is also a risk that church members' disapproval of some aspects of miners' lifestyles will lead to divisions.

The transition toward a different form of settlement is also expressed in the spatial distribution of houses and services within the village. The bars and brothels that are part of the lifestyle of many small-scale gold miners are on the periphery of the villages. Creporizão only has five streets—the main one joins the Transgarimpeira. The brothels are located on the main street, although not in the village center. In Creporizinho, the brothels are concentrated on one backstreet, away from where most families live.

The transition from movement to settlement is reinforced by the age composition of the population. Many of the miners are becoming old now, and they have abandoned the idea of returning home. One garimpeiro said, "I'm accustomed here . . . In the city today, I am scared . . . So if I wanted to go away, where would I go? At my age. I'm 55 years . . . There is no employment, I have no documents . . . So, for me, it's good here."¹³ Many older garimpeiros settle in villages such as Creporizão and Creporizinho, where there are some basic services and a community that is a little more stable compared to that at the mining sites.¹⁴

Strong external linkages have not been broken now that the villages are more settled. A continued focus on movement is apparent in relation to housing and the investments people make. As in the case of Tanzania described by Bryceson and MacKinnon (2012:530), most small-scale miners invest in modern housing in regional towns. Creporizão and Creporizinho can be seen as settled villages, yet their inhabitants often maintain close ties with regional urban centers and consider both locations as their home. The wife and son of a merchant with a flourishing business on the main street of Creporizão moved to Santarém when the son was old enough to attend secondary school. He sends them money, and visits them when he can combine it with business activities. In 2012, some 22 percent of the interviewed inhabitants of Creporizinho said they had a house in the city, mostly in Itaituba and Santarém. The main reason to maintain ties with larger urban areas is the lack of infrastructure and facilities in the mining settlements, such as schools and the other services described in this article.

In addition, gold is still directly or indirectly the main source of income for almost everyone in the region. The inhabitants of Tapajós and other provinces in north and northeastern Brazil have to be flexible and expand their networks and life worlds across rural and urban spheres. Their access to urban resources in the networks they construct in the Amazon and beyond compensate them for the

poor services and the soberness of living conditions in the garimpo (Costa and Brondizio 2009; de Theije and Bal 2010). Internal migration within the region is not limited to small-scale gold mining settlements, but is typical of the Brazilian Amazon region. It has been argued that “a great many newly urban households are ‘multi-sited,’ ‘multi-local,’ or dispersed, maintaining houses and, commonly, economic activities in rural areas as well as in the city” (Padoch et al. 2008:4). These movement patterns contribute to a blurring of the distinction between the rural and the urban in the region (Cleary 1993:338–339).

The populations in the *currutelas* are diverse, but everybody lives in the same context of the garimpo. In a certain sense everybody who lives in Creporizão is a *garimpeiro*: “People who are not from here don’t really understand this. For example, someone runs a shop, or like me, I also have a pharmacy, but we are all *garimpeiros*. We live here now, but we all live off mining.”¹⁵ Although people living in the villages have diverse professions and businesses, in earlier times many used to work in the mine. Also, everybody still depends on gold for their income. This shared socioeconomic context combined with their common individual histories as *garimpeiros* fosters communal identity within the villages. Tedesco (2015:123) notes that the expression “*comunidade garimpeira*,” especially in older *currutelas*, is being increasingly used in targeting the public policies to claim local rights. By profiling themselves in a united form, as a community with a shared history, the villagers can call on the government to provide such services as electricity, health posts, and schools.

Thus, the culture of movement that characterizes the garimpo is accompanied by increasing numbers of people who want to settle permanently and build a future here. They are restrained by a lack of schools, health facilities, and older age care, but economic opportunities are plentiful for entrepreneurs, and with growing government representation the outlook for the future is good. Settlements in strategic locations such as Creporizão and Creporizinho have enabled service providers to develop a more permanent lifestyle: to a large extent, however, this permanence is constructed through maintaining a notion of a garimpo community and mobility through links with regional urban centers.

Conclusion

Many scholars have emphasized the importance of studying urbanization in the Brazilian Amazon region. This article adds an often neglected perspective to the discussion: it shows the importance of small-scale gold mining to the urbanization debate by providing insights into its unique local dynamics and regional importance. The Tapajós small-scale gold mining region is subject to change, from the mobility of miners to settlement in mining villages. Whereas some *currutelas* have

turned into ghost towns, the villages of Creporizão and Creporizinho have evolved from temporary mining camps into permanent villages that are home not only to men, but also to families. Here, small-scale gold mining is no longer the sole means of economic income and, increasingly, services are being provided. The municipal government's passive–reactive approach coexists with local and informal initiatives. The development toward more permanence is expressed clearly in how people experience community. In the old days the garimpo lifestyle was more individualistic and hostile, but people now emphasize that life in the villages is tranquil and based more on solidarity. They have grown attached to “life in the garimpo” and feel strong ties with their village. There is a collective drive to take care of the surroundings and to invest in creating better living conditions. Despite the growing attractiveness and popularity of the mining villages for permanent settlement, ties with larger urban centers remain strong. People still depend on bigger cities for the circulation of goods and access to education, medical care, and other facilities. Many people therefore still choose to invest their savings in houses in larger urban areas. From this perspective, small-scale gold mining villages are not unique in the Amazon region, but represent a wider Amazonian trend toward urban–rural networks. Furthermore, for most inhabitants, gold mines and the related service economy continue to be the main source of income in Tapajós.

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Notes

¹One of the authors interviewed Felipe on March 3, 2011. All interviews were conducted in confidentiality and the names of the interviewees are withheld by mutual agreement. Anthropological fieldwork for this article was carried out by the three authors (in different combinations) in February–March 2011, July–August 2011, and March–April 2012, totaling eight months of research. In addition, a household survey was conducted in Creporizinho in 2003, and a sample survey was repeated in 2012 (Kolen and Mathis 2013). The 2003 household survey was part of a social study executed within the UNIDO Global Mercury Project (EG/GLO/01/G34: Removal of Barriers to Introduction of Cleaner Artisanal Gold Mining and Extraction Technologies), which was executed between 2002 and 2006.

²Urban status refers to the areas corresponding to cities (municipal headquarters), villages (district headquarters), or isolated urban areas, as it is a locality's political status. As such, although the Tapajós region is thinly populated, 72.5 percent of the official population of the municipality of Itaituba is considered urban (IBGE 2013a).

³Important exceptions are Cleary (1990), Larreta (2002), and MacMillan (1995).

⁴Although Mathis (2003:29) refers to the village as having a population of 10,000, we assume he includes those living and working in the surrounding garimpos. In this article, however, when we refer to Creporizinho we refer to the village itself and do not include the work places situated on the periphery, unless otherwise stated.

⁵We were not able to find official numbers of inhabitants for the villages in Tapajós. Our estimate is based on information obtained from interviews with community leaders and a local entrepreneur.

⁶Interview with owner of a garimpo/farm between Creporizão and Creporizinho along the Transgarimpeira, March 25, 2012.

⁷Interview with deputy mayor (2008–2012), Creporizão, July 11, 2011. The Sistema Único de Saúde (SUS; Brazilian national public health system) is not provided in this district, which means that patients must pay for every consultation. Responsibility for the provision of services within the SUS is decentralized and is primarily assigned to the municipalities (Díaz et al. 2012:113). The lack of a public health system in Creporizão shows that the district is of low interest to the municipality of Itaituba.

⁸In the village of Creporizão, electricity is sold by two entrepreneurs. They both charge 70 reais per ampere. People complain that it is very expensive. A household with only a refrigerator, a television, and a computer spends on average some 280 reais per month on electricity. This was equal to U.S. \$155 at the time of the research (March 2012).

⁹Interview with female villager from Creporizão, March 11, 2012.

¹⁰Interview with female villager from Creporizão, March 11, 2012.

¹¹Interview with a sergeant temporarily stationed in Creporizão, March 8, 2012.

¹²Interview with a young soldier stationed in Creporizão, March 8, 2012.

¹³Interview with garimpeiro in Canaã, February 2011.

¹⁴But what will the situation be like when he turns 60? Without documents, he will receive no pension. Will the community be strong enough to develop or call for elderly care, for those old retired miners who have no family to turn to?

¹⁵Interview with male villager from Creporizão, March 23, 2012.

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