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INDIGENOUS PEOPLES IN THE MUNICIPALITY OF DOUTOR CAMARGO ON THE MIDDLE IVAÍ RIVER, PARANÁ STATE*

ABSTRACT

This article highlights the presence of Indigenous peoples in the municipality of Doutor Camargo, located on the middle Ivaí River in the state of Paraná. We present the archaeological research developed in the region and in the municipality. A total of 14 archaeological sites were identified from 1968 to 2022, which were georeferenced and spatialized to show that the banks of the Ivaí River were an attractive region for human occupation. The rapids of the river were precious places for obtaining animal protein from fish, birds, and other animals, and the forests provided a multitude of goods for food and shelter. The first hunter-gatherer populations arrived around 6,500 BP, followed by the arrival of Guarani pottery-maker peoples around 1490 ± 45 years BP.

Keywords: Archaeology of Paraná; History of Paraná; Ivaí River; Doutor Camargo.

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POVOS ORIGINÁRIOS NO MUNICÍPIO DE DOUTOR CAMARGO NO MÉDIO RIO IVAÍ, ESTADO DO PARANÁ*

RESUMO

Neste artigo, buscamos evidenciar a presença dos povos originários no município de Doutor Camargo, localizado no médio Rio Ivaí no Estado do Paraná. Apresentam-se as pesquisas arqueológicas desenvolvidas na região e no município, onde foram identificados 14 sítios arqueológicos entre 1968 e 2022, que foram georreferenciados e espacializados a fim de demonstrar que as margens do Rio Ivaí foi uma região atrativa para ocupação humana. As corredeiras do rio foram locais preciosos para a obtenção de proteína animal de peixes, aves e outros animais, suas matas fornecerem uma infinidade de bens para alimentação e abrigos. As primeiras populações de caçadores-coletores chegaram por volta de 6.500 AP, seguida da chegada dos povos ceramistas Guarani por volta de 1490 ± 45 anos AP.

Palavras-chave: Arqueologia do Paraná; História do Paraná; Rio Ivaí; Doutor Camargo.

PUEBLOS ORIGINARIOS EN EL MUNICIPIO DE DOUTOR CAMARGO EN MEDIO RÍO IVAÍ EN EL ESTADO DE PARANÁ

RESUMEN

En este artículo se pretende identificar la presencia de los pueblos originarios en el municipio de Doutor Camargo, ubicado en el medio río Ivaí en el estado de Paraná (Brasil). Se presentan las investigaciones arqueológicas realizadas en la región y en el municipio donde se identificaron 14 sitios arqueológicos entre 1968 y 2022, los cuales pasaron por una georreferenciación y espacialización para demostrar que las orillas del río Ivaí fueron una región atractiva para la ocupación humana. Las rápidas en el río eran lugares valiosos para obtener proteína animal, tanto de peces como de aves y otros animales, y sus bosques proporcionaban numerosos bienes para la alimentación y refugio. Las primeras poblaciones de cazadores-recolectores llegaron alrededor del 6.500 AP, seguidas de la llegada de los pueblos ceramistas guaraníes alrededor de 1490 ± 45 años AP.

Palabras Clave: Arqueología do Paraná; Historia de Paraná; Río Ivaí; Doutor Camargo.

Introduction

When we asked the residents of Doutor Camargo, Paraná, what they knew about the history of their municipality, a large portion answered that the past of their city began when the first researchers of the Northern Paraná Land Company (CTNP) arrived there, who allotted and marketed the land in the 1940s, and then the first families of “pioneers” came and colonized the region. Most regional historiography would also answer this question similarly. So, the history of the territories belonging to the current municipality of Doutor Camargo is related to the socio-historical subjects who transformed the forests into large coffee plantations and built the city. This way of seeing the past of the location sets its zero point in the early 1940s, because before there were only forests, animals, and nature, and only then did civilization and history come. Eric Hobsbawm once said that the past is “a particular selection from the infinity of what is remembered or capable of being remembered,” and that

it will always have interstices, that is, matters that do not participate in the system of conscious history in which people incorporate, in one way or another, what they consider important about their society (Hobsbawm, 2013, p. 26).

Archaeological data confirm that the past of the Ivaí River valley and the territories that today make up the municipality of Doutor Camargo go beyond the milestones of the modern colonization carried out by the CTNP, having a depth that far exceeds the temporality of the pioneers. It is evident that this past also belongs to other men, women, and social subjects who lived there before modern settling.

Thus, our objective is to present the archaeological data already existing for the municipality of Doutor Camargo, not always available to the local population, and to reflect on the human occupation of the region before the first Europeans on the Ivaí River in early 16th century and modern colonization in the 20th century. Therefore, we believe that we can broaden the perception of this past, bringing to the regional

history the presence of other populations that managed these environments of forests, streams, and rapids of the middle Ivaí River, where they built their homes and raised their families, including them in the municipality's history.

The methodology for research on the past occupation of a region or of a population before the existence of written sources has been debated by researchers since the 1950s in the United States⁴. Ethnohistory makes combined use of several sources, such as: archaeological data related to material culture; written documentation and/or imagery produced by the various social subjects who related to these populations; linguistic, environmental, and ethnographic data; information generated by oral traditions; and the ethno-knowledge of past populations. When integrated into the analyses, these diverse sources have provided the best results in elucidating the past of Indigenous populations.

Archaeological data

To understand the human occupation of this region of the middle Ivaí River before the arrival of the Spanish and Portuguese, the main source are the remains of the material culture of the populations that inhabited there, found in the archaeological sites identified and prospected in the past 70 years.⁵

Many of these remains, especially polished stone artifacts such as pestles, pestle hands, axe blades, knapped stone objects (such as projectile points), and pottery artifacts (such as canisters and pipes) are found by local residents, who collect and store them in their homes

⁴ On the ethnohistory-related debate in the USA since the Columbus Conference in 1953, see the works published in the journal *Ethnohistory*, v. 8, n. 1, in 1961. The comments related to the papers presented were published that same year in v. 8, n. 2. Researchers from different areas such as folklore (Dorson, 1961), history (Washburn, 1961), anthropology (Voegelin, 1954; Valentine, 1961; Leacock, 1961; Ewers, 1961; Lurie, 1961), and archaeology (Baerreis, 1961) have approached this topic, using various perspectives. Since then, several summaries on the subject have been published, with emphasis on Carmack (1972), Trigger (1982), and a balance sheet published by Kelly K. Chaves em 2008. In Brazil, see the summaries published by Jorge Hermites de Oliveira (2003), Thiago Cavalcante (2011), and Lúcio Tadeu Mota (2014).

⁵ The sources of material culture are not exclusive, one can also use the documentary sources produced in the first encounters of Europeans with the Indigenous populations that lived in the region that refer to times before these encounters, in addition to the oral traditions and ethno-knowledge of the Indigenous populations that lived in these territories at the time of the arrival of Europeans in the region.

or donate them to public institutions such as city halls, museums, and universities, being incorporated into their collections. Archaeological research developed by teams of specialized professionals with technical training in the field of Archeology⁶ is one of the main means of locating and rescuing these objects. These expeditions can be done with academic objectives of understanding the human occupation of a certain area or within the scope of preventive archaeology to comply with the legislation that protects the Brazilian archaeological heritage.⁷

The expeditions, from academia or preventive archaeology, identify the archaeological sites where the remains produced by the populations that occupied the site are, demarcate it, salvage the archaeological assets found there and curate these assets, and forward them to institutions authorized by the Institute of National Historical and Artistic Heritage (IPHAN). Collected in the institutions responsible for the custody, the assets are made available for research, extroversión, and heritage education with regional communities.

To gather knowledge on the archaeological research that was developed in the municipality of Doutor Camargo, the following procedures were carried out:

- Search for archaeological sites registered in the municipality of Doutor Camargo and neighboring region on the platform of the National Register of archaeological sites (CNSA) of IPHAN and the Integrated Knowledge and Management System(SICG), also of IPHAN;
- Survey in the Electronic Information System (SEI) of IPHAN of all the processes that authorized archaeological research in the municipality of Doutor Camargo from 1991 to 2023;
- Listing of the literature related to archaeological research carried out in the municipality;

⁶ In addition to these expeditions, community donations are of utmost importance for the rescue of archaeological assets, either for the Guard and Research Institutions (IGP) or the archaeologists themselves when they consult the local community. Marina Amanda Barth's dissertation (2013) is an example of such process, "Archeology: community action or academic science," which addresses the activities developed by the Museum of Colégio Mauá and the Archaeological Teaching and Research Center of the University of Santa Cruz do Sul (UNISC).

⁷ The first law for the protection of national historical and artistic heritage was Decree no. 25/1937 (Brasil, 1937). Then, articles 216 and 225 of the Federal Constitution of 1988 (Brasil, 2002) established archaeological sites as Brazilian cultural heritage and guaranteed their protection. Moreover, several Ordinances and Resolutions of the Institute of National Historical and Artistic Heritage (IPHAN) were created to regulate issues related to the subject.

- Inventory of Research Reports carried out by the Laboratory of Archeology, Ethnology, and Ethnohistory (LAEE) of the University of Maringá (UEM) since its foundation in 1996 until 2023.

The survey was systematized in Table 1, with a total of 14 archaeological sites in Doutor Camargo.

Table 1 – Archaeological sites in the municipality of Doutor Camargo

No.	Site Identification	UTM Coordinate	Date BC	Date BP	Archaeological assets	Research and/or Venture	IPHAN Process	Source
1	Primeira Ponte – PR-FL-008 CNSA PR00105	22 K 367171 m E 7392378 m S			Lithic	PRONAPA		Chmyz, 1969.
2	Restaurante Ivaí 1 – PR-FL-018 CNSA PR00107	22 K 367406 m E 7392216 m S			Pottery	PRONAPA		Chmyz, 1969.
3	Restaurante Ivaí 2 – PR-FL-021 CNSA PR00108	22 K 367606 m E 7392063 m S	460	1490 ± 45	Pottery	PRONAPA		Chmyz, 1969. Stuckenrath; Mielke, 1973, p. 422.
4	Primeira Corredeira – PR-FL-022 CNSA PR00109	22 K 368162 m E 7391621 m S			Pottery	PRONAPA		Chmyz, 1969.
5	Segunda Corredeira – PR-FL-023 CNSA PR00110	22 K 368430 m E 7391322 m S	1390	560 ± 60	Pottery	PRONAPA		Chmyz, 1969. Stuckenrath; Mielke, 1973, p. 418.
6	Corredeira da Água 1 – PR-FL-024 CNSA PR00111	22 K 368535 m E 7390936 m S			Pottery	PRONAPA		Chmyz, 1969.
7	Corredeira da Água 2 – PR-FL-025 CNSA PR00112	22 K 368437 m E 7390450 m S			Pottery	PRONAPA		Chmyz, 1969.
8	Fazenda Santa Rita 1 – PR-FL-018 CNSA PR00106	22K 380743 m E 7394081 m S			Lithic	PRONAPA		Chmyz, 1969.
9	Fazenda Santa Rita 2 – PR-FL-027 CNSA PR00114	22K 380365 m E 7393785 m S			Pottery	PRONAPA		Chmyz, 1969.
10	Doutor Camargo I CNSA PR01578 SICG/IPHAN: PR4107306BAST00002	22 K 368349 m E 7392491 m S			Lithic	PR-323 – Maringá to Francisco Alves Pr	01508.000380/ 2014-48	Sapienza, 2014
11	Doutor Camargo II CNSA PR01582 SICG/IPHAN: PR4107306BAST00001	22 K 367337 m E 7392075 m S			Litho-pottery	PR-323 – Maringá to Francisco Alves Pr	01508.000380/ 2014-48	ArqueoLogística, 2018.
12	Rio Ivaí DC-01 SICG/IPHAN: PR4107306BAST00004	22K 367475 m E 7392031 m S			Litho-pottery	Lot Dourados do Ivaí	01508.000216/ 2021-60	ArqueoLogística, 2022a.
13	Rio Ivaí DC-02 SICG/IPHAN: PR4107306BAST00005	22K 368458 m E 7390936 m S			Lithic	Lot Morada dos Sonhos	01508.000094/ 2021-10	ArqueoLogística, 2022b.
14	Curva do Ivaí SICG/IPHAN: PR4107306BAST00003	22K 368811 m E 7390344 m S			Lithic	LT 525 KV Guaira – Sarandi	01508.900173/ 2017-38	Geoarqueologia, 2019. Meandros, 2020a A Lasca, 2022.

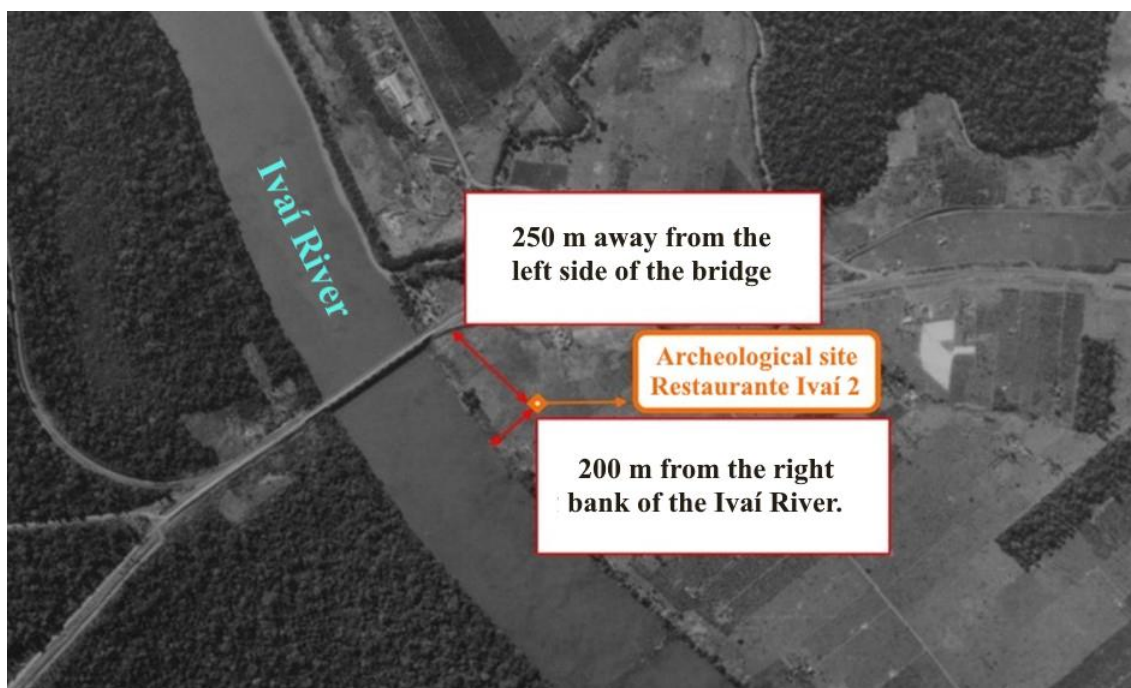
Source: prepared by the authors.

Spatialization of archaeological data in Doutor Camargo

Once the survey was finished, we began to spatialize the archaeological sites in the municipality. Of the 14 sites in Doutor Camargo, five of them have geographical coordinates and nine did not. The sites prospected from 2014 have the coordinates defined in the research reports and in the site sheets sent to IPHAN, available at CNSA and SICG. The other nine sites surveyed from 1966 to 1967, prior to the development of the global positioning system (GPS), had no georeferencing coordinates. To create them, we used the descriptions contained in the publications that characterize the sites. As an example, the archaeological site Restaurante Ivaí 1 is described

in the publication by Igor Chmyz (1969, p. 104) as being about 200 meters from the right bank of the Ivaí River, and in the CNSA/IPHAN site file we have the information that it is located 250 meters away from the left side of the bridge over the Ivaí River. With this information, we plotted its position in the 1970 aerial photo image (Figure 1). Thus, we georeferenced the nine sites prospected by Igor Chmyz in 1966 and 1967 in this region of the middle Ivaí River.

Figure 1 – Example of how the approximate coordinates of the archaeological sites surveyed in 1966 and 1967 were established



Source: prepared by the authors on Aerial Photo IBC/GERCA, Photointerpretation Service, Coffee Regions of the State of Paraná. Sheet: SF-22-Y-D-IV-2-NO. 1970.

The archaeological data obtained were organized in the chronological sequence of their prospections, as shown in Table 1. In this table, we sought to highlight the archaeological assets found in the sites—lithic and pottery artifacts—, relating them to the well-known archaeological and historical literature on the human occupation of the region. We also highlighted the two dates obtained to show the temporality of the occupations and sought to spatialize the archaeological sites in the municipality with georeferencing to

understand the preferential niches of occupation of the Indigenous peoples in this region. This process resulted in the spatialization of the existing archaeological sites in Doutor Camargo until 2022, as shown in Maps 1 to 5.

The first humans on the Ivaí River

Many traces of human settlements can be found throughout Paraná. The oldest of them are the Caiuã site—in the municipality of Cândido de Abreu, dated by archaeologist Paulo Zanettini to 13,500 years BP—and the Entre Morros site—dated to 10,935 years BP (Zanettini, 2022). In the Tibagi River valley, there is the PR-AS-14 site, in the municipality of Sapopema, dated by archaeologist Igor Chmyz at 9,190 years BP, and in the Iguaçu River, the Ouro Verde site, dated at 9,040 years BP by researcher Claudia Parellada of Museu Paranaense, as shown in Table 2.

Table 2 – Archaeological sites dating pre-pottery hunter-gatherer populations in Paraná

Site Identification ⁸	Municipality	Archaeological Asset	Date BC ⁹	Date Bp ¹⁰	Code and Laboratory	Sources
Marina 3 – PR-FO-049/CNSA PR00770	Guaira	Pottery	2,115	4,065 ± 75	SI 5045	Chmyz, 1983, p. 101.
José Vieira ¹¹	Guaporema	Lithic	3,291	5,241 ± 306	Gif 80	Laming-Empeaire, 1968, p. 95-96
Três Irmãos/SICG/IPHAN: PR-4104402-BA-ST-00003	Cândido de Abreu	Lithic	3,400	5,350 ± 1.320	Dat 5406	Zanettini, 2021a, Zanettini, 2022
Porto de Areia 1 – PR-QN-001/CNSA PR00408	Mirador	Lithic	3,430	5,380 ± 110	SI 1014	Stuckenrath; Mielke, 1973, p. 422. Chmyz, 1969.
Rio dos Índios	Cândido de Abreu	Lithic	3,620	5,570 ± 380	Dat 5402	Zanettini, 2022, Zanettini, 2022
Porto Gomes 1 – PR-FI-021/CNSA PR00135	Foz do Iguaçu	Lithic	4,315	6,265 ± 80	SI 4992	Chmyz, 1983 p. 101.
Rio dos Índios	Cândido de Abreu	Lithic	4,685	6,635 ± 450	Dat 5403	Zanettini, 2022, Zanettini, 2022
José Vieira	Guaporema	Lithic	4,733	6,683 ± 355	Gif 78	Laming-Empeaire, 1968, p. 95-96
Porto Gomes 1 – PR-FI-021/CNSA PR00135	Foz do Iguaçu	Lithic	4,915	6,865 ± 105	SI 4993	Chmyz, 1983 p. 101.
Porto Gomes 1 – PR-FI-021/CNSA PR00135	Foz do Iguaçu	Lithic	4,960	6,910 ± 75	SI 4994	Chmyz, 1983 p. 101.
Diamante do Norte – PR-NL-008/CNSA PR00104	Diamante do Norte	Lithic	6,165	8,115 ± 80	SI-6401	Chmyz & Chmyz, 1986, p. 75.
Rio do Padre/SICG/IPHAN: PR4114500BAST00008	Manoel Ribas	Lithic	7,050	9,000 ± 640	Dat 5408	Zanettini, 2020; Zanettini, 2022
Ouro Verde I – BE-1/SICG/IPHAN: PR4103024BAST00004	Boa Esperança do Iguaçu	Lithic	7,090	9,040 ± 400	ANU-192-17	Parellada, 2005, p. 34.
Ribeirão Barra Grande-3 – PR AS 14 SICG/IPHAN: PR-4107009-BA-ST-00047	Sapopema	Lithic	7,240	9,190 ± 60	Lacivid/USP BETA-24254	Chmyz et al., 2008, p. 52-54. IPHAN, 2023
Entre Morros/SICG/IPHAN: PR4127965BAST00015	Turvo	Lithic	7,550	9,550 ± 675	Dat 5747	Zanettini, 2021b; Zanettini, 2023 ¹² .
Caiuã/SICG/IPHAN: PR-4104402-BA-ST-00006	Cândido de Abreu	Lithic	8,985	10,935 ± 1.075	Dat 5404	Zanettini, 2020; Zanettini, 2022
Caiuã/SICG/IPHAN: PR-4104402-BA-ST-00006	Cândido de Abreu	Lithic	11,550	13,500 ± 1.150	Dat 5405	Zanettini, 2020; Zanettini, 2022

Source: prepared by the authors.

Archaeological research in the middle Ivaí River

The research carried out in Paraná reveal two horizons of occupation related to the Indigenous peoples. The first, between 13,500 and 2,000 years ago, shows the region occupied by non-pottery populations, whose predominant archaeological remains are artifacts and lithic debitage with technological standards named by archaeologists as Umbu Tradition and Humaitá Tradition. The second horizon starts around 2,000 BP, when pottery-making populations began to occupy the current basins of the Paraná, Ivaí, Paranapanema, Pirapó, Tibagi rivers and their tributaries. This was one of the fronts of the wide expansion of the Guarani-speaking peoples, who had been systematically appropriating the territories of the Paraguai and Paraná rivers to then extend this occupation to the valleys of their tributaries, from the Tietê River in the north to the Uruguay River in the south.

Archaeological research carried out in the Ivaí River valley dates back to the 1950s. More precisely, in 1958, a group of archaeologists from the Department of Anthropology of the Federal University of Paraná (UFPR) was informed about finds on the banks of the river, in the far West Parana, in the town of Cidade Gaúcha, today Guaporema

(Laming-Emperaire, 1969).

The excavations carried out at the site called José Vieira demonstrated the existence of several human occupations at the site. The lithic material, collected at the deepest levels of the excavations and subjected to dating, recorded a date of $6,683 \pm 355$ BP. The material collected in the upper layers of the deposit is dated at $5,241 \pm 306$ BP, meaning new camps at times later than the first (Laming-Emperaire, 1968).

When the French José Emperaire and Annette Laming-Emperaire excavated the José Vieira site in the municipality of Cidade Gaúcha, the middle and lower Ivaí Valley had not yet been fully occupied by modern settlers, and its banks had immense forests, as shown by the aerial photographs taken in the 1953 flight by Serviços Aerofotogrammetricos Cruzeiro do Sul S. A. at the request of the Department of Geography, Lands, and Colonization of the State of Paraná (Figure 3). The right bank of the Ivaí River, in the district of Doutor Camargo, had not yet been allotted, as shown in the 1951 plan of Cia Melhoramentos Norte do Paraná (Figure 2).

Figure 2 – Partial Plan Nº V



Source: prepared by the authors on the plan of Cia Melhoramentos.

Indigenous peoples in the municipality of Doutor Camargo on the middle Ivaí River, Paraná state

Figure 3 – Area of concentration of archaeological sites in the municipality of Doutor Camargo in 1953

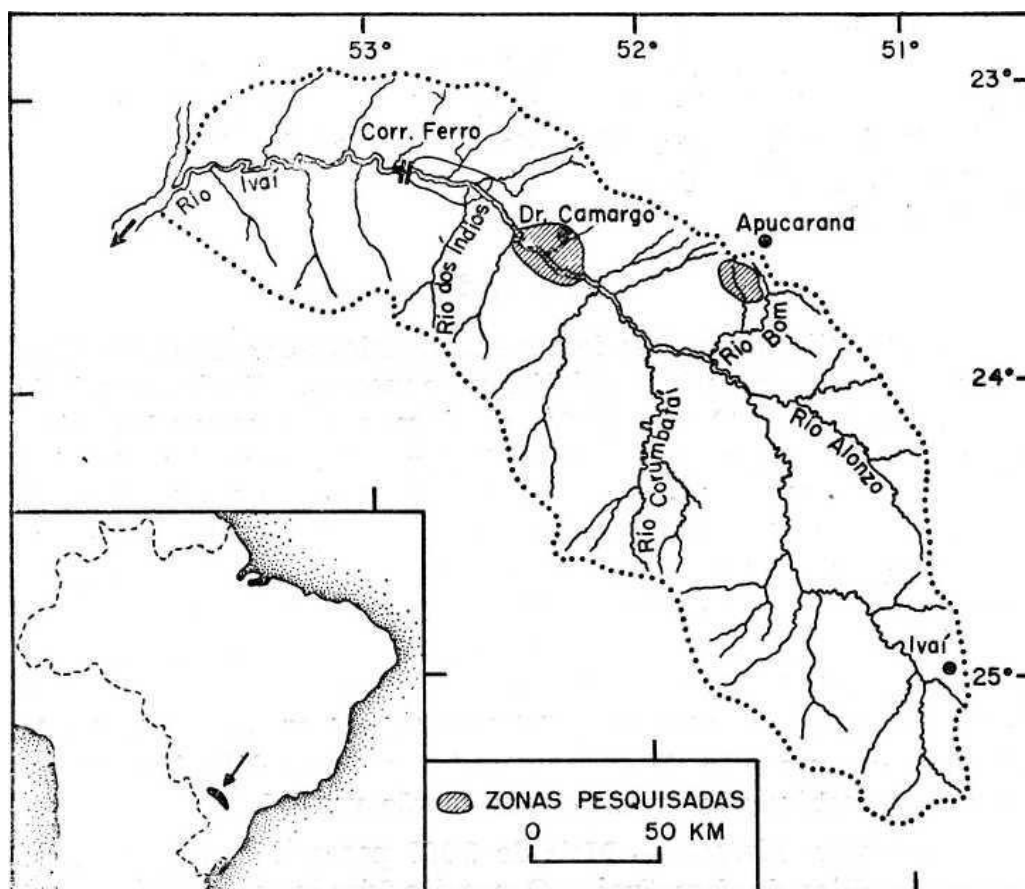


Source: prepared by the authors on Aerial Photo of Serviços Aerofotogramétricos Cruzeiro do Sul S.A. Sheet: SF-22-Y-D-IV-2-NO, 1953.

In the following decade (between 1966 and 1967), the archaeologist Igor Chmyz carried out new prospections in the middle and lower Ivaí River. He researched the vicinity of the Corredeira do Ferro, then municipalities of Cidade Gaúcha and Mirador, on the right bank of the Ivaí River in Doutor Camargo, and in the municipality of Apucarana. At the time, Chmyz surveyed 39 archaeological sites in these three localities. Of these, 13 were lithic sites, 25 contained pottery fragments and/or artifacts, and one of these was a rammed earth structure.

All the sites were housing and open. [...] In general, the archaeological sites were located in the vicinity of rapids and at the mouth or along small tributaries of the Ivaí River. These populations always settled high points and were safe from the periodic floods (Chmyz, 1969, p. 97).

Figure 4 – Archaeological surveys carried out by Igor Chmyz in the Ivaí River Basin in 1966/67



Source: Chmyz, 1969, p. 97.

Archaeological sites in the municipality of Doutor Camargo

Archaeologist Igor Chmyz of UFPR surveyed archaeological sites in Doutor Camargo in 1966 and 1967. He is the first researcher to provide information about human occupation in this region, recording nine archaeological sites in the municipality found on the right bank of the Ivaí River: two containing only flaked stone artifacts; seven containing pottery artifacts and fragments—classified by him as being from the Tamboara Phase; and also one with traces of rammed earth walls that could be a Spanish settlement or a Jesuit Refuge (Chmyz, 1969, p. 98). This site is today in the municipality of Ourizona, on the right bank of Ribeirão Bandeirantes do Sul.

In the 1960s, in the context of the archaeological research carried

out by Igor Chmyz, the two middle banks of the Ivaí River in this region were already fully colonized by Companhia de Terras Norte do Paraná (CTNP) and its successor, Cia Melhoramentos. The forest, once full of dangers, had turned into fertile oxisol lands that were “ready to provide bountiful harvests” (Maringá Ilustrada, 1972, p. 194).

In a lecture given in June 1959 at the Federal Research Institute for Forest and Timber Economics in Hamburg, Germany, geographer Reinhard Maack discussed the issue of colonization of the northern state of Paraná and its consequences on the natural landscape. He said:

Who knew in those times that virgin rain forests would disappear so quickly and to such an extent? When the first farms and granges were being organized, I drew attention to the consequences of rampant deforestation, requiring corresponding forest reserves on each property. Currently flying over the north of Paraná, one can see that this requirement was better met by the inhabitants of Rolândia. The forest was completely destroyed in other areas. The minimum required forest reserve of 15 to 20% was only maintained on a few properties. The consequences are already manifested to a frightening extent, which can be verified by the figures based on objective observations, which I will present later (Maack, 1961, p. 29).

Modern occupation has removed the original vegetation consisting of Mixed Ombrophilous Forest and Semidecidual Seasonal Forest for coffee crops. As had already occurred throughout the region between the Tibagi and Pirapó rivers until the mid-1950s, deforestation reached the right banks of the Ivaí River, exceeded it and headed towards the state borders on the Paraná River.

Reinhardt Maack presented important data on the modification of nature in the region, pointing out several consequences resulting from the removal of the forest: climate change; disturbances in water cycles, with a decrease in water table levels, depletion of sources, and increase of sediments in streambeds; changes in the chemical composition of the soil, with the loss of fertility; among many others (Maack, 1961, p. 40-44). What the author did not point out were the serious implications that deforestation would cause to the regional

archaeological heritage.

The accelerated process of occupation of the region had two expansion movements. The first was material, with the transformation of nature (removal of the ancient forest, implantation of coffee plantations and, destruction of the vestiges of past occupation). In this process, the “pioneer” society was destroying the vestiges of the presence of traditional societies (Indigenous and Mixed-race), as their settlements, their villages and dwellings, the marks of their forest management, and many of the artifacts of their material cultures. At first, these traces were burned along with the forest and left in the open. Then, they were destroyed by the rainfalls, winds, and the heat of the sun, then by the hoes of the settlers in the management of the crops, and then, from the 1980s, revolved by the plows and subsoilers with which the soil is managed in depth for planting soybean, maize, wheat, and sugarcane, or for pastures. This is the context that we will find on the banks of the Ivaí River in the municipality of Doutor Camargo: a modified nature, with decontextualized traces of old occupations.

The second movement was the ideological one, with the construction of the idea that these territories were “immense voids,” devoid of inhabitants, which were being colonized for the production of food for the world. This one was just as devastating as the first one.

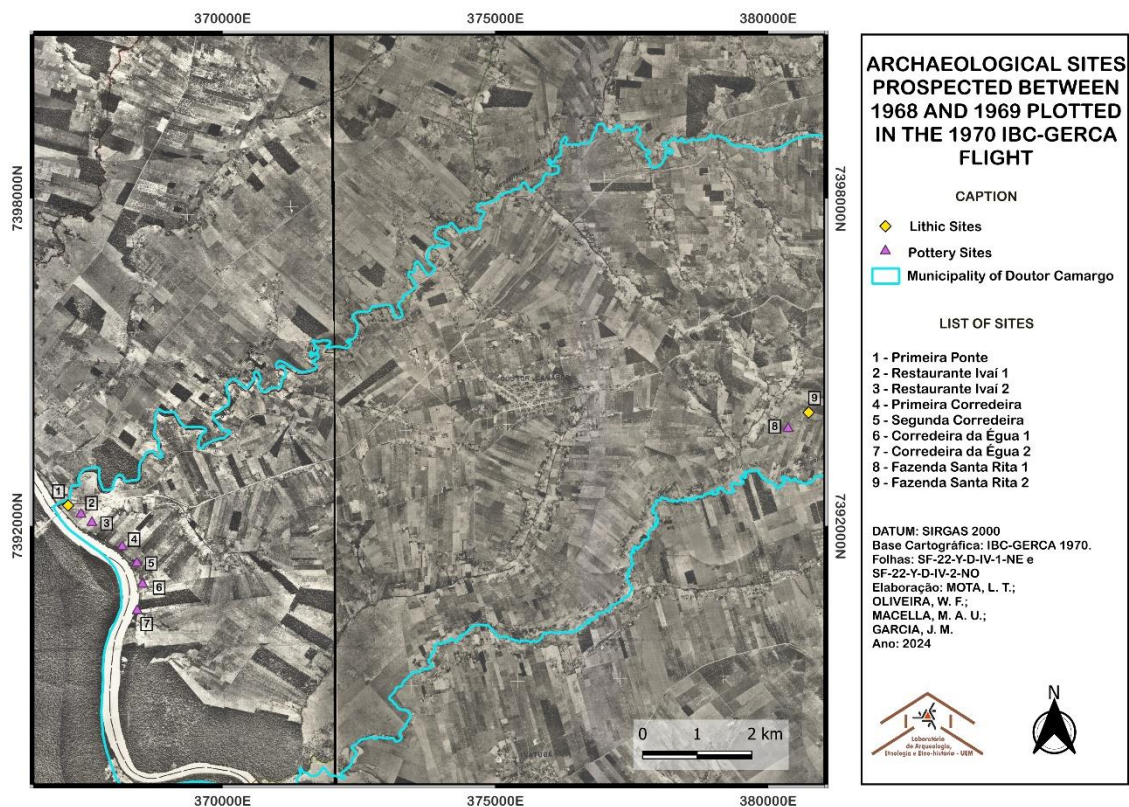
In 1970, the Brazilian Coffee Institute (IBC), and the Executive Group for Rationalization of Coffee Farming (GERCA) carried out a new flight that included the region of the municipality studied here⁸. In this study, one can see the territories of Doctor Camargo, in the polygon between the Ivaí River and its tributaries (Ribeirão Bandeirante and Ribeirão Paissandu), almost completely deforested, except for small plots of land, a larger area at the confluence of Ribeirão Paissandu into the Ivaí River, and areas of forest on the left bank of that river.

When we georeferenced the archaeological sites prospected by

⁸ For more details on the IBC-GERCA flight, see Oliveira (2012).

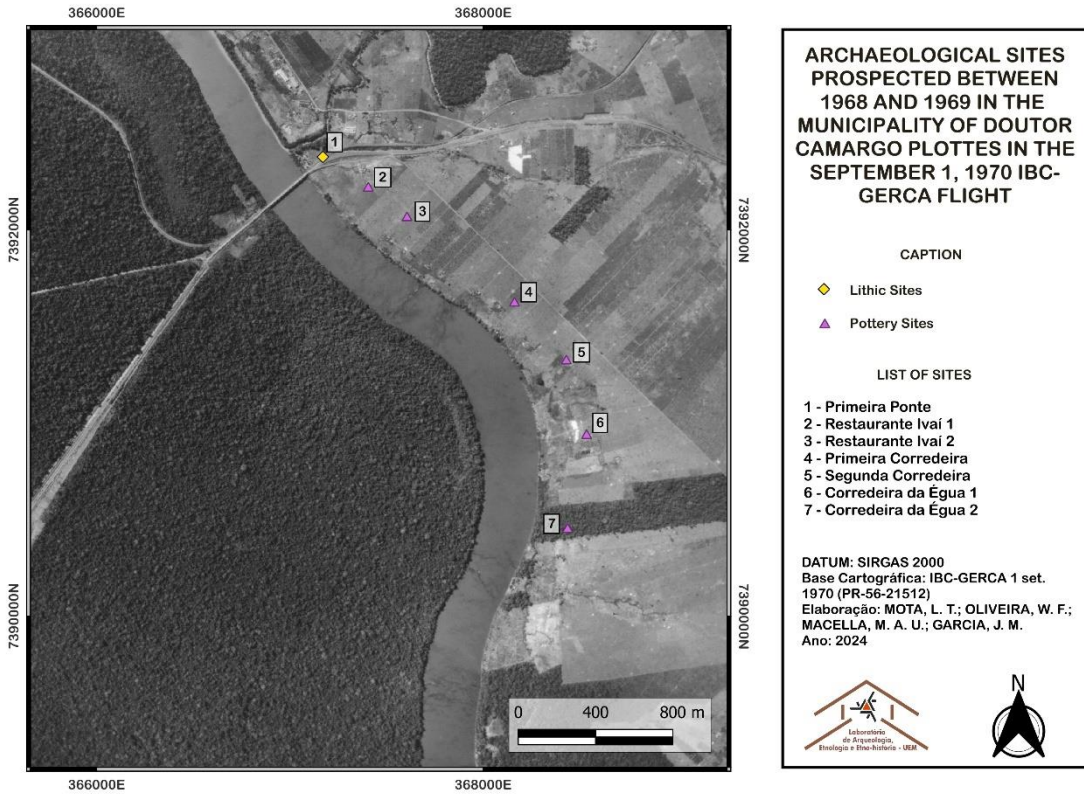
Igor Chmyz in 1966/1967 in the image of the IBC/GERCA flight of 1970, we visualized that almost all of them (except number 7 – Corredeira da Égua 2) were located in areas already deforested and had suffered anthropic actions (Maps 1, 2, and 3).

Map 1 – Archaeological sites prospected in the municipality of Doutor Camargo and plotted in the 1970 IBC-GERCA flight



Source: prepared by the authors on Aerial Photo IBC/GERCA, Photointerpretation Service, Coffee Regions of the State of Paraná. Sheet: SF-22-Y-D-IV-2-NO e SF-22Y-D-IV-1-NE. 1970.

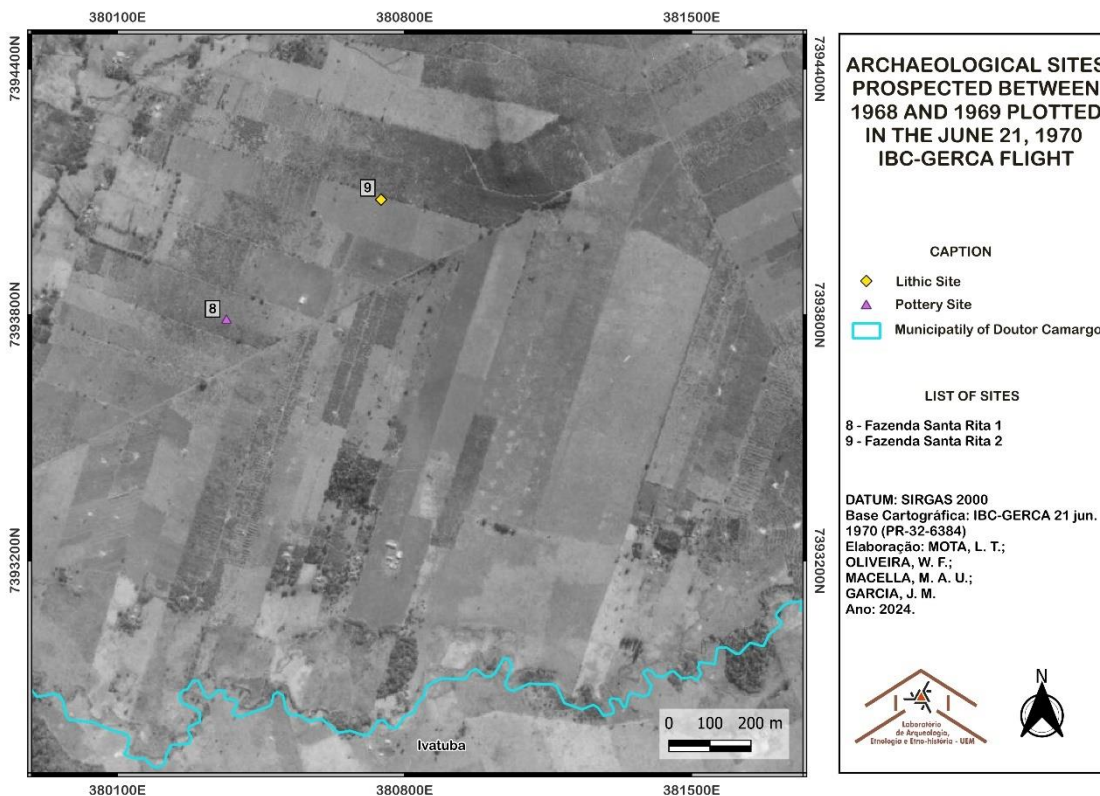
Map 2 – Detail of the archaeological sites prospected in the municipality of Doutor Camargo in 1966/1967 and in the 1970 IBC-GERCA flight



Source: prepared by the authors on Aerial Photo IBC/GERCA, Photointerpretation Service, Coffee Regions of the State of Paraná. Sheet: SF-22-Y-D-IV-1-NE. 1970.

Indigenous peoples in the municipality of Doutor Camargo on the middle Ivai River, Paraná state

Map 3 – Detail of the archaeological sites prospected in the municipality of Doutor Camargo in the 1970 IBC-GERCA flight



Source: prepared by the authors on Aerial Photo IBC/GERCA, Photointerpretation Service, Coffee Regions of the State of Paraná. Sheet: SF-22-Y-D-IV-2-NO. 1970.

More than 50 years have passed since Igor Chmyz’s explorations, and new archaeological research has been carried out in Doutor Camargo, now under the aegis of the legal provisions that have come to govern the Brazilian Archaeological Heritage.⁹

From 2014 to 2018, research related to the expansion of PR-323 was carried out. In the project “Diagnosis and archaeological prospecting in the area of duplication, restoration, maintenance, conservation, and operation of the PR-323 corridor, between the municipality of Maringá and the access to the municipality of Francisco Alves,” the responsible company identified two archaeological sites:

⁹ We highlight the following legislation: the Federal Constitution in its Articles 23 and 216, which provide for Brazilian cultural heritage including archaeological sites; Law No. 3,924, of July 26, 1961, which provides for archaeological and prehistoric monuments; several IPHAN ordinances; and Interministerial Ordinance 419, of October 26, 2011, Annex III-D, which provides for the need for diagnostic studies of “assets of cultural interest” to be “executed in their entirety” and the obligation of heritage education in licensing processes.

Doutor Camargo 1 and Doutor Camargo 2¹⁰.

In 2022, new archaeological surveys were carried out on the right bank of the Ivaí River for the implementation of leisure condominium enterprises. Research in the area of the Dourados do Ivaí settlement revealed the litho-pottery archaeological site Rio Ivaí DC-01, and in the Morada dos Sonhos settlement, the lithic archaeological site Rio Ivaí DC-02.¹¹

With the implementation of the Guaíra – Sarandi electric power Transmission Line, started in 2019, the lithic site called Curva do Ivaí was discovered.¹²

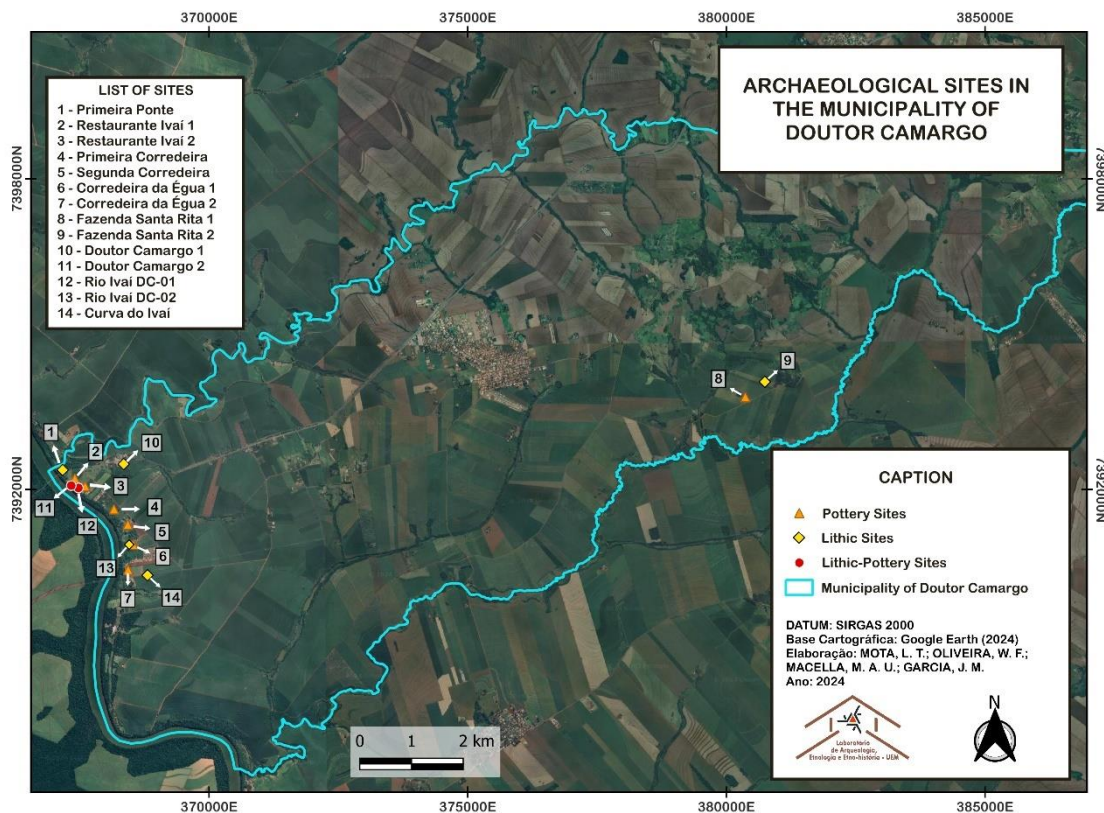
Thus, until 2022, a total of 14 archaeological sites were registered in the municipality of Doutor Camargo, 12 of them on the banks of the Ivaí River and two in more distant points, as shown in Maps 4 and 5 below.

¹⁰ Diagnosis carried out by the company Sapienza – Pesquisa e Gestão do Patrimônio Arqueológico LTDA, under the responsibility of PhD archaeologist Deisi Scunderlick Eloy de Farias. Process 01508.000380/2014 (Sapienza, 2014).

¹¹ The research was carried out in 2022 by ArqueoLogística Consultoria Arqueológica, under the responsibility of archaeologist Jardel Stenio de Araújo Barbosa. The Dourados do Ivaí enterprise is registered in the IPHAN Process no. 01508.000216/2021-60, and the Morada dos Sonhos in the IPHAN Process no. 01508.000094/2021-10.

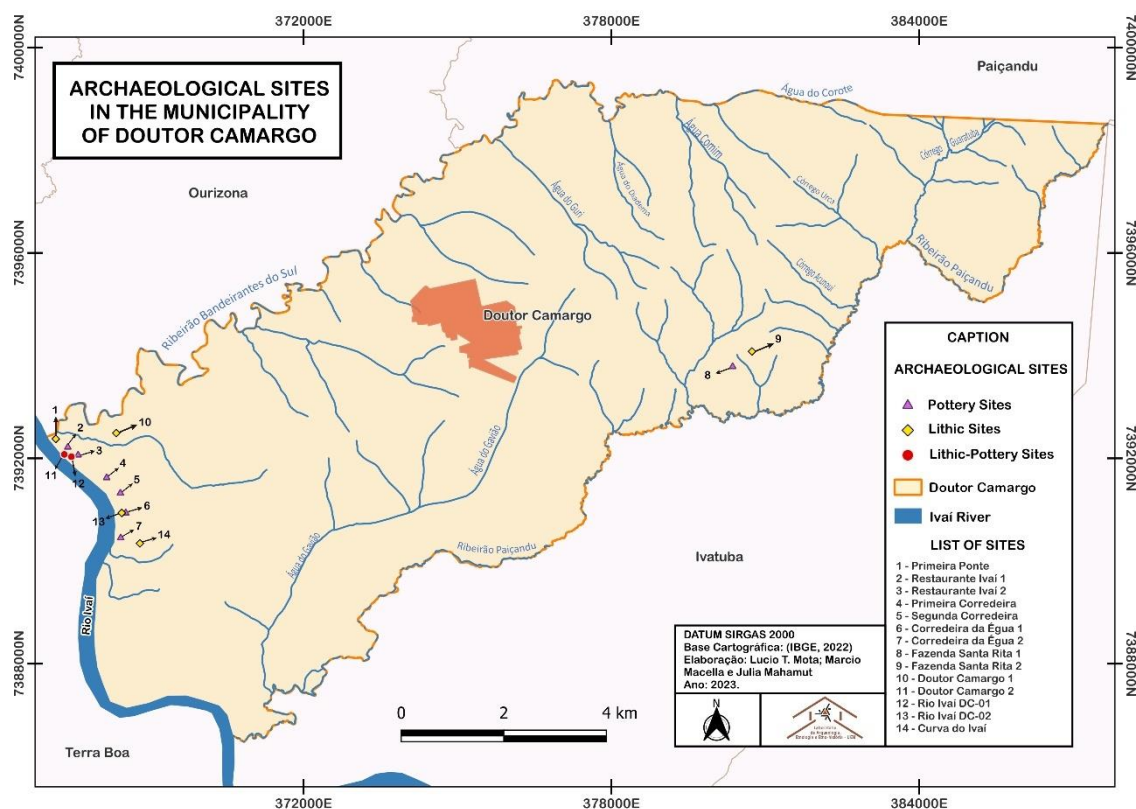
¹² LT – Guaíra – Sarandi, Process 01508.900173/2017-38, had the first impact studies on archaeological heritage carried out by Geoarqueologia Pesquisa Científica Ltda in 2019, under the technical responsibility of archaeologist Osvaldo Paulino da Silva. Then, in 2022, the Archaeological Heritage Management Program was continued by Meandros Consultoria Ambiental Ltda, under the general coordination of archaeologist Fábio Origuela de Lira, and was finalized by A Lasca Consultoria e Assessoria em Arqueologia Ltda, under the coordination of archaeologist Lúcia De Jesus Cardoso Oliveira Juliani. The Curva do Ivaí lithic site is registered in SICG/IPHAN – PR4107306BAST00003.

Map 4 – Archaeological sites in the municipality of Doutor Camargo



Source: prepared by the authors on Google Earth image (2024).

Map 5 – Archaeological sites in the municipality of Doutor Camargo



Source: prepared by the authors.

The first inhabitants of Doctor Camargo

As can be seen in Table 1, of the 14 sites recorded, four contain exclusively flaked lithic material. This data shows the occupation of populations of pre-pottery hunter-gatherer fishermen in what are now the municipality of Doutor Camargo.

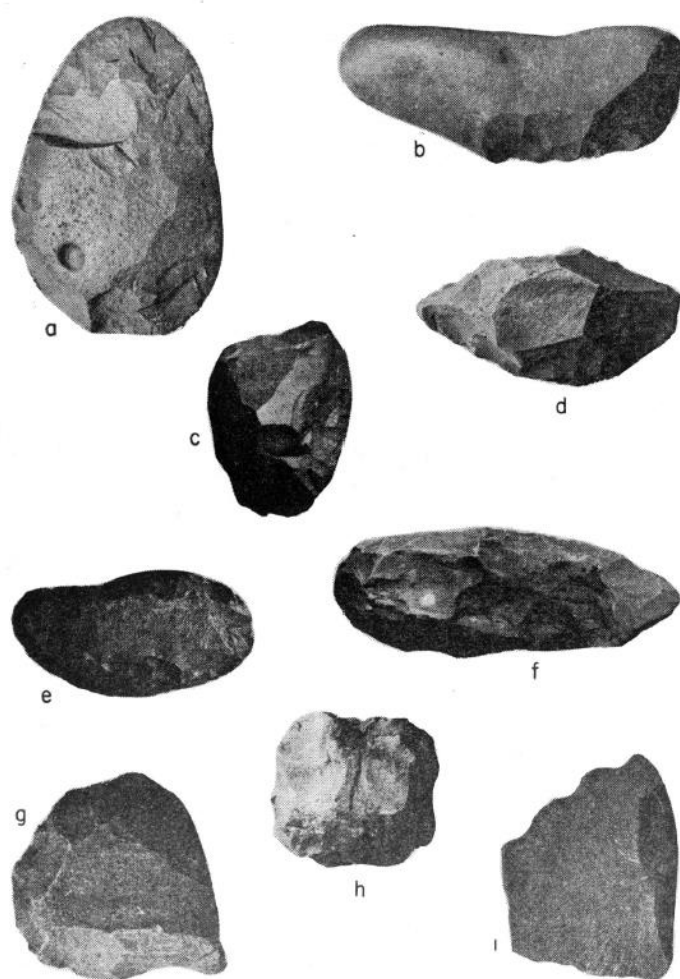
The traces left by these populations are mainly made up of flaked lithic artifacts¹³ and blocks of metamorphic sandstone, used as instruments for scraping, tearing, cutting, turning, drilling, and other functions in the daily life of hunter-gatherers. These artifacts are found in abundance throughout the Ivaí River Basin, confirming the presence of these groups in the entire region.

In his research on the Ivaí River, Igor Chmyz collected more than 1,100 lithic artifacts in 13 sites, highlighting the tools called

¹³ In other regions, bone artifacts, stone paintings, and remains can be found in the archaeological sites of pre-pottery populations.

hammerstones, choppers, pickaxe, scrapers, and various types of flakes used for cutting and scraping. These objects of the first populations present in the Ivaí River, in Doutor Camargo and in neighboring municipalities, are scattered along the entire basin of the Ivaí River and its tributaries. The author grouped the lithic sites in the Ivaí Phase and described their artifacts and their functions.

Figure 5 – Lithic artifacts found in archaeological sites in the middle/lower Ivaí



Artefatos da fase Ivaí sobre núcleos (a-f) e lascas (g-i). a, Machado de mão unifacial). b, Talhador. c, Raspador circular. d, Raspador plano-convexo (cepilho). e, Faca. f, Lesma. g, Raspador circular. h, Raspador quadrangular. i, Raspador com escotaduras (várias escalas)

Source: Chmyz, 1969, p. 23, print 26.

The rescue of the archaeological assets of the Curva do Ivaí lithic

site, carried out in 2022¹⁴, confirms and expands the typology of the artifacts described in the research of the 1960s. A total of 673 lithic artifacts of various types of stones and purposes—associated with the Humaitá and Umbu archaeological cultures—were rescued.

Figures 6 to 9 – Lithic instruments found at the Curva do Ivaí archaeological site in Doutor Camargo



Source: A Lasca Arqueologia, 2022, p. 46.



Source: A Lasca Arqueologia, 2022, p. 611.



Source: A Lasca Arqueologia, 2022, p. 51.



Source: A Lasca Arqueologia, 2022, p. 49.

Indigenous peoples in the municipality of Doutor Camargo on the middle Ivaí River, Paraná state

¹⁴ The Curva do Ivaí archaeological site was identified and rescued by the research carried out on the occasion of the implementation of the LDAT 525 kV Guaira – Sarandi Transmission Line, Process 01508.900173/2017-38. The Impact Assessment studies were carried out by Geoarqueologia Pesquisa Científica LTDA and The Heritage Management Programs were carried out by Meandros Consultoria Ambiental Ltda and A Lasca Consultoria e Assessoria em Arqueologia Ltda.

Figures 10 to 13 – Lithic flakes found at the Curva do Ivaí archaeological site in Doutor Camargo



Source: A Lasca Arqueologia, 2022, p. 100.



Source: A Lasca Arqueologia, 2022, p. 107.



Source: A Lasca Arqueologia, 2022, p. 158.



Source: A Lasca Arqueologia, 2022, p. 189.

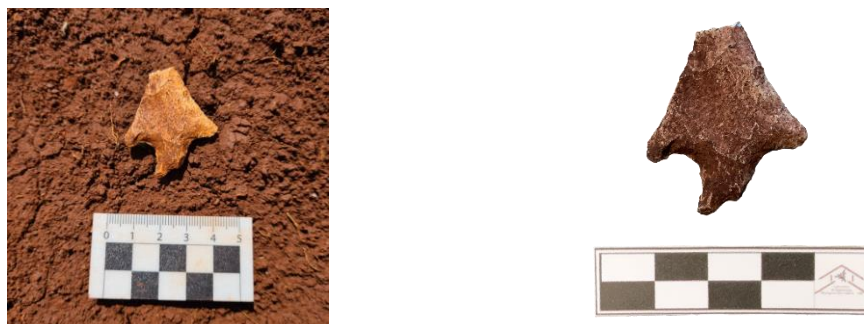
Other types of artifacts were also found, such as projectile points, medium and small scrapers, and small flakes used for cutting and scraping, and large amounts of debitage were found in their lithic workshops.

Figures 14 and 15 – Projectile point (PN12) found at the Curva do Ivaí archaeological site in Doutor Camargo



Source: Meandros Ambiental, 2022, P.54 and Photographic Collection of LAEE-EMU.

Figures 16 and 17 – Projectile point (PN19-B) found at the Curva do Ivaí archaeological site in Doutor Camargo



Source: Meandros Ambiental, 2022, P.54 and Photographic Collection of LAEE-EMU.

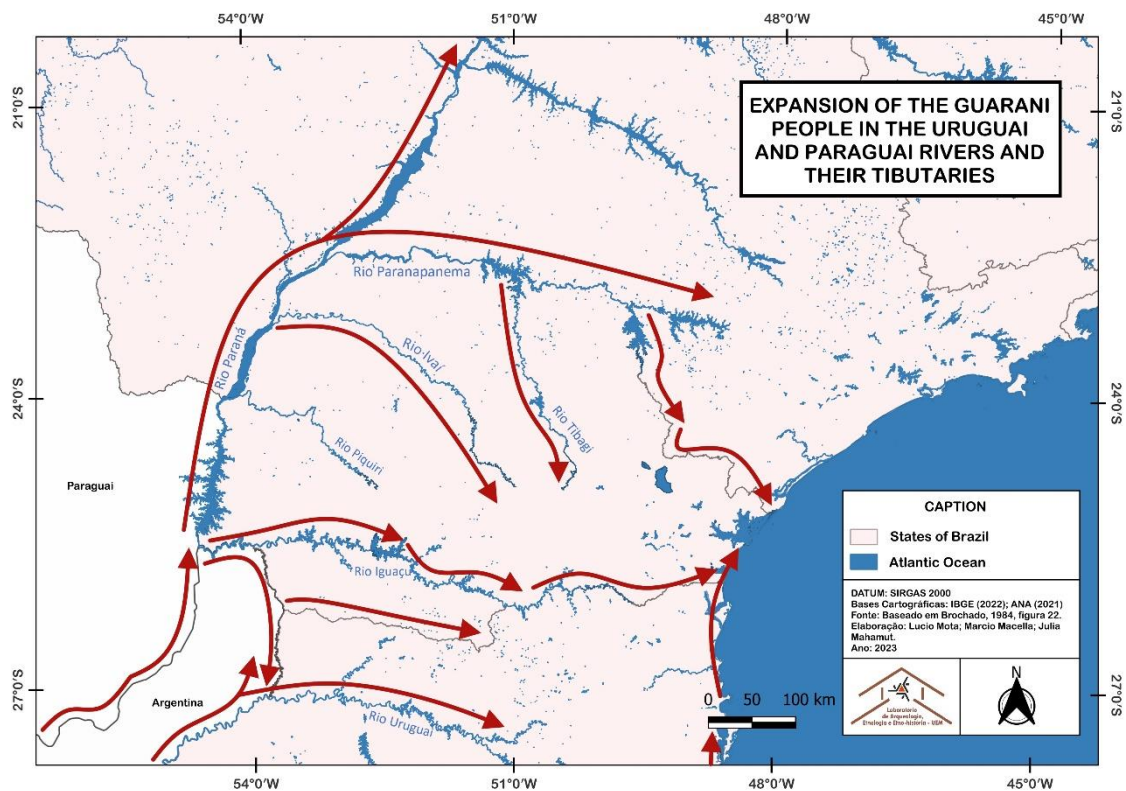
The arrival of pottery-maker farmers

Around 2,000 years before present, the farming and pottery-maker populations known as Guarani began to arrive on the Paraná River and then entered its tributaries, reaching the Ivaí River. As they headed north, they established their *Tekohas* (villages) and left their traces, mainly fragments of pottery.

According to the archaeological literature, this was one of the fronts of the wide expansion of the Guarani-speaking peoples, who had been systematically occupying the territories of the Paraguai and Paraná river. Some researchers argue that these groups had a common cultural matrix that ensured the reproduction and maintenance of a similar structure in linguistic, socioeconomic, political, religious, and material aspects (Noelli, 1999/2000).

Guarani-speaking populations left traces of their material culture throughout the valley of the Paranapanema, Ivaí, Piquiri, Iguaçu, and Uruguai rivers and their tributaries. Among these, the tools and fragments of their pottery industry stand out. Archaeological sites that contain such pottery are called Tupi-Guarani Tradition by archaeology. The records of these sites published by the specialized literature or registered in the CNSA database of IPHAN show the temporal depth and spatial extent of this occupation.

Map 6 – Entry and expansion of the Guarani peoples



Source: prepared by the authors. Based on Brochado, 1984.

Table 3 – Archaeological sites of pottery-maker farming populations of the Tupi-Guarani archaeological tradition in the Paraná and Ivaí rivers with more than 1,000 BP

Site Identification	Municipality	Date BP	Laboratory	Reference
Sítio Geraldo – PR-ST-001 CNSA PR00270	Indianópolis	1065 ± 95	SI-695	Chmyz, 1969. Stuckenrath & Mielke, 1973, p. 418. Brochado, 1973.
Taquapelingai – PR-FI-97 CNSA PR00211	Foz do Iguaçu	1235 ±60	SI-5016	Chmyz, 1983. Chmyz, 1977.
José Vieira	Guaporema	1380 ± 150	Gif 81	Laming- Emperaire, 1968.
Dona Carlota 4 – PR-FI-142 CNSA PR00536	São Miguel do Iguaçu	1395 ±60	SI 5033	Chmyz, 1983, p. 103. Chmyz, 1979, p. 44.
Restaurante Ivaí 2 – PR-FL-021 CNSA PR00108	Doutor Camargo	1490 ± 45	SI-1011	Chmyz, 1969. Stuckenrath & Mielke, 1973, p. 418. Brochado, 1973.
Borevi 1 – PR-FI-099 CNSA PR00213	Foz do Iguaçu	1565 ±70	SI-5019	Chmyz, 1983.
Lagoa Seca – PR-FI-118 CNSA PR00484	Santa Helena	1625 ± 60	SI-5021	Chmyz, 1983.
Dona Carlota 2 – PR-FI-140 CNSA PR00534	São Miguel do Iguaçu	2010 ± 75	SI-5028	Chmyz, 1979, p. 44. Chmyz, 1983.

Source: prepared by the authors. SI = Smithsonian Institution Radiocarbon Measurements.
Note: The most recent sites dated by Preventive Archeology in the Ivaí River are still being verified and analyzed by the authors and therefore were not included in this article.

Archaeological information indicates that the Paraná River Basin and its tributaries were populated by pre-pottery populations known in archaeology as Humaitá and Umbu Traditions until around 2,000 years B.P., and then by pottery-maker farmers known in archaeological literature as Tupi-Guarani Tradition.

Pottery-maker farmers in Doutor Camargo

The pottery-maker farmers, speakers of the Tupi-Guarani linguistic family, entered the Ivaí River and began constructing their *Tekoha* preferably in the immediate vicinity of the waterfalls and rapids. This preference is related to the capture of fish in their traps called *pari*.¹⁵ When headed upstream on the Ivaí River, these

¹⁵ The *pari* is a fishing trap built "of stones in the riverbeds and with collecting baskets and extremity downstream [...]" (Mota, 2022, p. 64).

populations came across the first great rapids, currently called the Corredeira do Ferro, and the first archaeological site with pottery remains dating from 1,380 years BP of the Tupi-Guarani Tradition was recorded in its vicinity, José Vieira site, prospected by José and Annette Emperaire in the 1950s (Laming-Emperaire & Emperaire, 1959).

Guarani language speakers continued to move up the Ivaí River and construct their *Tekoha* on its banks. On the right, between the confluences of Ribeirões Bandeirantes do Sul and Paíçandu, today in the municipality of Doutor Camargo, they built their villages near several rapids. Archaeological research indicates the existence of eight sites with pottery remains attributed to them there, and a ninth site with traces of this pottery, Fazenda Santa Rita 2, recorded in Ribeirão Paíçandu 12 kilometers away from its mouth in the river. This shows that the expansion of these populations also occurred with the exploration of new areas of fishing, hunting, gathering, and farming on the banks of the tributaries of the larger rivers.

When prospecting these banks of the Ivaí River in the 1960s, Igor Chmyz (1969, p. 97-98) found that the sites with pottery remains were located “in the vicinity of rapids and at the mouth or along small tributaries of the Ivaí River,” and that they “always occupied high points and were safe from periodic floods”. Most were located between 100 and 300 meters from the Ivaí River bank, but some were more than 10 km away from the main river (Chmyz, 1969), as is the case of the Fazenda Santa Rita 2 site in the municipality of Doutor Camargo. They occupied a circular perimeter “with 20-25 meters in diameter,” and deposits with pottery traces reached a depth of “up to 20 cm” (Chmyz, 1969, p. 104). Chmyz classified the seven sites on this bank of the Ivaí River registered by him as belonging to the “Guarani tradition” and “Tamboara phase” (Chmyz, 1969, p. 103).

He collected 2 thousand pottery fragments in these places, “with a predominance of the chorded technique” in the manufacture. He classified the decorated pottery as “Painted Tamboara,” with

subdivisions for painting colors and engobo. Still in relation to surface treatment, he distinguished its various types, from simple corrugated, unguulate, serrungulate, brushed, and notched to ribbed Tamboara (Chmyz, 1969, p. 104). Regarding the shape of the bowls, he identified “26 well-defined pottery shapes ranging from small bowls, medium ones to a large bowl” (Chmyz, 1969, p. 104).

Five years after his research, the requested dates were published in the journal *Radiocarbon*. Two dates refer to the pottery sites located in Doutor Camargo, a more recent one, from 560 ± 60 BP, related to the Segunda Correadeira site, and an older one, from $1,490 \pm 45$ BP, related to the Restaurante Ivaí 2 site. This date indicates the presence of pottery groups in the Ivaí River almost 1,500 years before the present.

The litho-pottery sites prospected in the preventive archaeology projects between 2018 and 2022 also identified pottery remains, but they were not dated. As a result of research related to the expansion of BR 323, Sapienza Arqueologia identified the Doutor Camargo II site, described as “multicomponential with the presence of flaked lithic material from the Humaitá tradition, and Guarani pottery material” (Sapienza, 2014). The second site with pottery fragments recorded was Rio Ivaí DC-01, resulting from research in preventive archaeology prospected by ArqueoLogística for the Dourados do Ivaí residential condominium project (ArqueoLogística, 2022, p. 49).

Figures 18 and 19 – Pottery fragments associated with the archaeological site Doutor Camargo 2



Source: ArqueoLogística, 2022a, p. 59.



Source: ArqueoLogística, 2022a, p. 70

Table 4 – Archaeological sites with Guarani pottery registered in the municipality of Doutor Camargo

No.	Site name, acronym, CNSA, and SICG/IPHAN	UTM Coordinate Site Location	Dating BP	Research and/or Venture	IPHAN Process	Reference
1	Restaurante Ivaí 1 PR-FL-018 CNSA PR00107	22 K 367406.00 m E 7392216.00 m S		PRONAPA		Chmyz, 1969.
2	Restaurante Ivaí 2 PR-FL-021 CNSA PR00108	22 K 367606.00 m E 7392063.00 m S	1490 ± 45	PRONAPA		Chmyz, 1969. Stuckenrath & Mielke, 1973, p. 422.
3	Primeira Corredeira PR-FL-022 CNSA PR00109	22 K 368162.00 m E 7391621.00 m S		PRONAPA		Chmyz, 1969.
4	Segunda Corredeira PR-FL-023 CNSA PR00110	22 K 368430.00 m E 7391322.00 m S	560 ± 60	PRONAPA		Chmyz, 1969. Stuckenrath & Mielke, 1973, p. 418.
5	Corredeira da Égua 1 PR-FL-024 CNSA PR00111	22 K 368535.00 m E 7390936.00 m S		PRONAPA		Chmyz, 1969.
6	Corredeira da Égua 2 PR-FL-025 CNSA PR00112	22 K 368437.00 m E 7390450.00 m S		PRONAPA		Chmyz, 1969.
7	Fazenda Santa Rita 2 PR-FL-027 CNSA PR00114	22K 380365.98 m E 7393785.90 m S		PRONAPA		Chmyz, 1969.
8	Doutor Camargo II CNSA PR01582 SICG/IPHAN: PR4107306BAST00001	22 K 367337.01 m E 7392075.97 m S		PR-323 – Maringá Francisco Alves Pr	01508.000380/2014-48	Sapienza, 2014. ArqueoLogística, 2018.
9	Rio Ivaí DC-01 SICG/IPHAN: PR4107306BAST00004	22K 367475.00 m E 7392031.00 m S		Lot Dourados do Ivaí	01508.000216/2021-60	ArqueoLogística, 2022.

Source: prepared by the authors.

Conclusion

The territories of the municipality of Doutor Camargo, on the right bank of the Ivaí River, were attractive places for fixing the presence of original human groups, in the multiple occupations that occurred there, because they had a fishing river, with rapids that facilitated fishing and obtaining animal protein; abundant forest areas that housed a vast

flora for plant collection of various uses; and fertile soil for cultivation of different food and medicinal species. The first wave consisted of hunters, fishermen, and gatherers (pre-pottery), as evidenced with the Curva do Ivaí archaeological site. The second occurred with the arrival of Guarani-speaking pottery peoples, around 1490 ± 45 years BP. These favorable characteristics also attracted modern settlers to the region, who settled there from the 1940s seeking a better life for their families.

However, in memory and in regional historiography, the past of this locality is related only to the socio-historical subjects who transformed the forests into immense coffee plantations and built the city. This past has as its zero point the presence of the first CTNP surveyors, who allotted and commercialized the lands in the 1940s/1950s and brought the first families of “pioneers,” who arrived and colonized the region. It is a particularized perspective that excludes the presence of indigenous peoples present there for thousands of years.

Thus, we present the existing research and archaeological data for the municipality of Doutor Camargo, not always available to the local population, and seek to reflect on the human occupation of the region before the arrival of the first Europeans in the Ivaí River in the early 16th century. Therefore, we believe that we can broaden the perception of this past, bringing to the regional history the presence of other populations that managed these environments of forests, streams, and rapids of the middle Ivaí River, where they built their homes and raised their families, including them in the history of the municipality.

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