Analysis of Metal Content in Various Traditional Tools of the Dayak Tribe in Sampit

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Kata kunci

Sampit, Dayak tribe, Metal alloy, Traditional tools, ethnochemistry

Abstrak

Kalimantan tengah merupakan wilayah yang memiliki sumber daya alam berupa logam yang melimpah. Mayoritas suku di Kalimantan Tengah menggunakan berbagai perpaduan logam dalam alat sehari-hari mereka. Suku tersebut adalah suku Dayak. Suku Dayak terbagi menjadi berbagai macam golongan. Ada suku Dayak yang tinggal di hutan, ada yang tinggal di sekitar aliran sungai, dan ada suku yang tinggal di daerah pesisir. Masing-masing suku tersebut memiliki keunikan tersendiri dalam kehidupan sehari-hari. Artikel ini akan fokus membahas penggunaan logam dalam peralatan suku Dayak Ngaju yang berada di daerah Sampit, Kalimantan Tengah. Metode yang digunakan dalam membuat artikel ini adalah dengan metode observasi lingkungan ke Museum Balanga yang berada di Kota Palangka Raya, Kalimantan Tengah, dan wawancara kepada pihak Museum Balanga mengenai peralatan logam tradisional yang ada di museum. Dari hasil wawancara dan observasi didapati berbagai macam peralatan yang menggunakan logam-logam yang berbeda.

Keywords

Sampit, Dayak tribe, Metal alloy, Traditional tools, ethnochemistry

Abstract

Central Kalimantan is an area that has abundant natural resources in the form of metals. The majority of tribes in Central Kalimantan use various metal alloys in their everyday tools. The tribe is the Dayak tribe. The Dayak tribe is divided into various groups. There are Dayak tribes who live in the forest, there are those who live around rivers, and there are tribes who live in coastal areas. Each of these tribes has its own uniqueness in everyday life. This article will focus on discussing the use of metal in the tools of the Dayak Ngaju tribe in the Sampit area, Central Borneo. The method used in making this article is the environmental observation method at the Balanga Museum in Palangka Raya City, Central Kalimantan, and interviews with the Balanga Museum regarding traditional metal equipment in the museum. From the results of interviews and observations, it was found that various types of equipment used different metals.

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PENDAHULUAN

The Dayak tribe is the original inhabitants of the island of Borneo. Based on data from the population census, the population of the Dayak tribe reaches 3,400,000 people. The name Dayak was given by the Malays who came to the island of Borneo. The term Dayak refers to the word 'Daya' which means upstream, which shows the habits of the people who live in the upstream areas of the river inland. The Dayak tribe is divided into more than 200 different tribes [1]. The tribe that is the main focus of this article is the Dayak Ngaju tribe in Sampit, Central Kalimantan. Sampit itself is one of the main cities in Central Kalimantan which is the area where the Dayak tribe maintains and practices traditional customs. Therefore, the Dayak tribe in Sampit has wealth that covers various aspects of life, including the manufacture of unique and valuable traditional tools.

The Sampit region, Central Kalimantan, is one of the centers of life for the Dayak tribe with a unique cultural wealth. This area is surrounded by natural beauty, such as dense tropical forests, and fast-flowing rivers [2]. In the city of Sampit, there are Dayak tribes who live in inland and coastal areas. Pesisir Dayak, also known as Seberuang Dayak or Seruyan Dayak, are a group of Dayak tribes who live in the coastal area of Sampit City, especially along major rivers such as the Seruyan River. Coastal Dayak communities generally have economic activities related to fisheries and agriculture [3]. Meanwhile, the Dayak Inland, also known as the Ngaju Dayak or Bakumpai Dayak, are a group of Dayak people who live in the interior of Sampit City, especially in the area around the Muller Mountains. Inland Dayak people have economic activities based on agriculture, plantations and other traditional activities. Meanwhile, the Inland Dayak tribe, also known as the Ngaju Dayak or Bakumpai Dayak, is a group of Dayak people who live in the interior of Sampit City. Inland Dayak people have economic activities based on agriculture, plantations and other traditional activities.

The differences between the two groups of Dayak tribes have an influence on the way of life and cultural patterns of the Dayak tribe itself [4]. Relations between regions and Dayak tribes can create a unique cultural identity, including ethnochemical knowledge and practices in the use of natural materials, plants, and most importantly metal in the daily life and traditional ceremonies of the Dayak tribe in Sampit. According to [5], Ethnochemistry are various cultural practices that exist in society and have a relationship with chemistry. In addition, ethnochemistry is the study of chemical ideas that can be found in any culture related to chemistry that describes the chemical practices of a cultural group that can be identified as a study. The subject that can be studied in ethnochemistry in the Sampit region is the use of metals and metal alloys by the Dayak tribe.

In the context of Dayak culture in Sampit City, Central Kalimantan, metals and alloys play a significant role. Metals are chemical elements with high thermal and electrical conductivity properties, as well as good strength. Some of the metals commonly used in the culture of the Dayak tribe in Sampit City include iron, copper and silver. Iron is used in making traditional tools such as machetes, axes and knives, which are used in daily activities as well as in traditional ceremonies. Copper is used to make jewelry, such as bracelets and necklaces, which are an integral part of traditional Dayak clothing. Silver is also used in the manufacture of jewelry and small statues that have high cultural and aesthetic value. Apart from pure metals, the Dayak people in Sampit City also use alloys, namely metal alloys, to meet their specific needs. For example, the use of metal alloys such as bronze, which is a mixture of copper and tin, is used in the manufacture of gongs and traditional

Dayak musical instruments. The use of these metals and alloys in the culture of the Dayak tribe in Sampit City illustrates their knowledge of the chemical properties of metals and their expertise in processing and using them traditionally. Overall, metals and alloys play an important role in the culture of the Dayak people in Sampit City, Central Kalimantan. The use of these metals and alloys reflects the extraordinary knowledge and skills in ethnochemistry and the importance of these materials in the daily life and rituals of the Dayak people in the region.

In addition, studying the use of metal in traditional tools will increase understanding of the culture of the Dayak tribe in Sampit. This article provides a state of the art understanding of the use of metals and alloys in Dayak culture. This increases the opportunity to appreciate the beauty of traditional tools. Therefore, the many cultural diversity of the Dayak tribe involving metal or metal alloy instruments led to the study of "Analysis of Metal Content in Various Traditional Tools of the Dayak Tribe in Sampit" was carried out.

METHODS

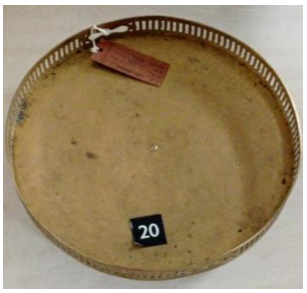
The research methodology used in this study is a qualitative approach by means of literature studies, observations, interviews, and documentation. The literature study process used comes from various sources such as journal articles, books, and museums. The museum chosen in this study is the Balanga museum which holds many Dayak relics. Observations and interviews were conducted with the museum guard at the Balanga Museum. The documentation technique of this research is by documenting objects made of metal alloys in the Balanga museum

RESULT AND DISCUSSION

Based on the research conducted, there are several uses of metals as shown in Table 1. It can be seen in the table that there is a grouping of metals used in Dayak culture in Sampit. The use of metal in typical Dayak culture (Sampit) is mostly in the part of traditional rituals and weapons. Metals used in some of these traditional tools include brass, iron, steel, silver and copper, with the most commonly used is the brass.

Tabel 1. Result Data From Interview

No.	Name	Picture	Element	Usage
1	Peludahan		Brass	to accommodate memories after the ceremony

2	Bokor (Sangku)		Brass	As a tool for traditional wedding rituals
3	Talam		Brass	Traditional ceremonies, places to put offerings
4	Kopor Kuningan		Brass	Place for Wedding Clothes
5	Tempat Penginangan		Brass	Betel nut place
6	Mandau		Iron	As a tool for daily necessities or as a weapon for traditional ritual ceremonies and dances. Also a

				traditional weapon
7	Duhung		Iron	Traditional weapons, used in rituals.
8	Sipet		Iron	Traditional weapon, used for hunting a prey or enemy

Brass alloys are used extensively in many different industries, including the electrical and electronic, automotive, and sanitary industries. They are characterized by high thermal and electric conductivity as well as exceptional antibacterial properties. Brass is frequently added with various alloying elements to improve its machinability because manufacturing brass components involves a lot of cutting operations [6]. Brass is a non-ferrous metal that is used as machine and craft components. Brass is an alloy of copper (Cu) and zinc (Zn) with more than 50% copper, and zinc (Zn) as the main alloying metal. Brass (Cu-Zn) has good corrosion resistance and wear resistance and good casting ability, making this material widely used [7]. Zinc alloy up to 39% gives a more elastic mixed crystal so that when cold it can be perfectly changed in shape (easily formed) and high corrosion resistance. Copper-zinc or brass alloys can be used for heat exchangers, parts that are corrosion resistant and strong and have [8]. In Table 1. it can be seen that there is a lot of use of brass metal in typical Dayak tools, namely spittoons (Spittoon), bowls (Sangku), trays, suitcases, and inns, these tools are mostly used in rituals and for everyday life (hosting). Chewing or commonly known as coriander is an activity of chewing betel leaves with or without other additives. Additional ingredients in coriander can vary between regions. Usually, additional ingredients that are often used for betel nut are areca nut seeds, lime, gambier, grated coconut, peppermint, cardamom, cloves, fragrances, and stimulants [9]. To put kinangan materials (areca nut seeds, lime, gambier, etc.). The process of making panginangan from brass is carried out using the a cire perdue technique, namely by processing wanyi wax (a type of honey-producing bee) to be used as a wax mold according to the shape of the part to be printed. Then the waste wax is wrapped with clay mixed with sand. The result of the wrapping of the wax waste is called a landfill, at the edges of which a funnel is made that is connected to the wax waste in the earthen package (earth waste). Furthermore, the waste soil is dried and then burned again in the hearth pile to melt and remove the wax waste in the soil waste. The liquid brass that has been

melted down in the kitchen (stove) of the fireplace is put into an earthen waste until it is full and placed temporarily to freeze the liquid brass that has been poured. Then it is cooled with a splash of water, then the soil waste will crack and crack so that it is easy to dispose of the soil waste. In this way, the results of objects made according to local traditional technology can be seen. Furthermore, after the printed object is removed from the landfill (mold), it is then cleaned and the outer layer is filed so that it is neat and ready to be carved, if you wish to be given an ornamental motif.

Iron in its pure state is a white-gray metal, shiny, hard and can be formed easily. Iron at room temperature is in the form of ferrite or called α-iron, namely iron with a body-centered cubic structure, with a density of 7.87 g/cm3. Iron is a good conductor of heat and electricity. Chemically iron has a relative atomic mass of 56 g/mol and atomic number 26 with the symbol Fe which is abbreviated from the Latin root word Ferrum. Iron is grouped into the group of transition elements and belongs to group 8 d block in the periodic table system of elements, with the electron configuration [Ar] 3d6 4s2. Iron has several oxidation states, but the most common are iron(II) and iron(III). Iron(II) is very reactive and has a tendency to oxidize to iron(III) on contact with air[10]. One of the tools that used iron in it is the Mandau. Mandau is made through the process of heating iron by burning ironwood waste using an electric powered air blower. Ironwood was chosen because it is capable of producing higher heat than other woods. Mandau is one of the traditional weapons typical of the Dayak tribe, which is usually used in traditional rituals, and is also often used in typical Dayak dances. The Prisai Kambit dance is a typical Dayak dance that uses traditional saber weapons. This dance depicts a war in which the dance is equipped with a kambit shield and saber. Mandau describes a tool or weapon to attack while the kambit shield functions as a protective device, guarding against attacks or defending against enemy attacks. Saber and shield become one unit in protecting oneself from war, flames, and tools to break up fights. Mandau is made with the basic ingredients of steel. According to literature at the Balanga Museum, Palangkaraya, the raw material for saber is iron (sanaman) mantikei which is found in the upper reaches of the Matikei River, Tumbang Atei Village, Sanaman Matikei District, Samba, East Kotawaringin. Before the manufacture begins, a traditional ceremony is carried out in accordance with the traditions of each Dayak tribe. This iron is flexible so it is easy to bend. The raw material for making ordinary sabers can also use iron per car, chainsaw blades, vehicle discs and other iron rods. The working tools used mainly are hammers, betel, and a piece of sharpened iron to make holes in the saber for decoration [11].

CONCLUSION

Based on data obtained from interviews and museum observations, there are several metals used in traditional Dayak tools, namely brass and iron. It has been found that the metal most used in traditional Dayak tools in Sampit is brass. Most tools made using brass have high artistic value and high spiritual value. Brass is used because it is easy to obtain, easy to form, light, and cheap. Apart from that, there is also the factor that brass objects for the indigenous Dayak people are objects that have high and sacred value. Most of traditional tools that contain metal is mainly used for weapon, and some property in spiritual ceremony.

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