

Feather Mosaics from the Keram River

Exceptional Sepik Assemblage Art

By Valentin Boissonnas

Throughout New Guinea,

bird feathers have long played an important part in dance costumes and personal adornment, and they continue to do so. In the East Sepik Province, feathered dance costumes of extraordinary complexity and height were recorded in the early twentieth century in villages on the Keram and Ramu Rivers, the Murik Lagoon, and Hansa Bay (figs. 2 and 4). A different ceremonial use of feather mosaic arrays on wooden supports existed in villages along the Keram River and are the subject of this study. Very little contextual information was recorded when these assemblages were collected between 1913 and 1936, but recent research indicates that panel-shaped feather mosaics were arranged into large-scale assemblages inside the men's ceremonial houses for the initiation ceremonies of young men. As highly charged and powerful objects, they bridged the world of the living with that of the ancestors, a visual aid to access complex myths and stories that would provide the spiritual foundation for every young man's education. While clearly related, the exact function of paddle-shaped feather mosaics collected in the same region still eludes us.

EARLY COLLECTORS

In the years 1912 and 1913, the German Kaiserin-Augusta-Fluss-Expedition, headed by the geologist Artur Stollé (1872–1934), extensively explored and surveyed the Sepik River and its tributaries (fig. 3). Anthropologist Richard Thurnwald (1869–1954) joined the expedition in January of 1913 and was assigned the Töpferfluss, known today as the Keram River, where he set up camp between the villages of Bunaram (Bano) and Ramunga (Arome) (fig. 5).



FIG. 1 (left): Detail of fig. 9 (following page).

FIG. 2 (above): Masked and decorated dancers from the western coastal Sepik area. Photo by Fr. Franz Kirschbaum.

Historical Photo Archive, Rautenstrauch-Joest-Museum – Cultures of the World, Cologne, inv. 3352D.

FIG. 3 (right): The lower Sepik and the Keram River with some of the villages mentioned in the text of this article. Feather mosaics were also recorded as being collected in the villages of Angarep, Gabumonum, Garep, Tyburum, and Tyamboto, but their locations are no longer known.

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FIG. 4 (right): Masked Kambot (Ambot) dancer with feather mosaic headdress. Photo by Fr. Franz Kirschbaum.

Historical Photo Archive, Rautenstrauch-Joest-Museum – Cultures of the World, Cologne, inv. 3356D.

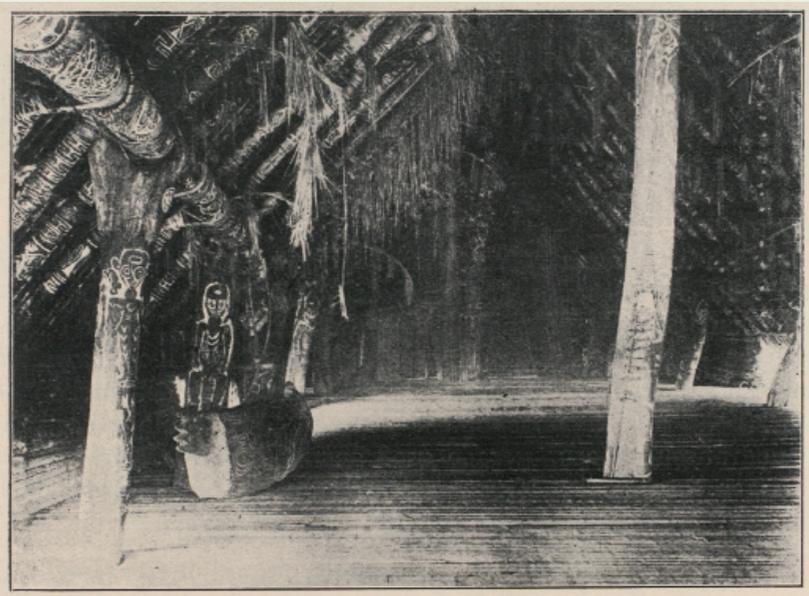


FIG. 5 (right): Richard Thurnwald on the way from the Sepik to the coast with his indigenous helpers in 1913.

Ethnologisches Museum der Staatlichen Museen zu Berlin-Preußischer Kulturbesitz, inv. VIII B 8566.



amples from various villages. The majority were immediately dispatched to the Museum für Völkerkunde of Berlin (Thurnwald 1917: 170). The First World War put an end to Thurnwald's fieldwork, and he was made prisoner of war in January 1915 by Australian troops, who also confiscated the more recent material he had collected that was still in New Guinea. Two feather mosaics, now in the National Museum of Australia, are most likely part of this seized material. After the First World War, some of the Berlin feather mosaics were distributed to regional ethnographic museums such as Munich, Stuttgart, Dresden, Göttingen, and Mannheim. The dire financial situation of the Berlin museum was a contributing factor for the sale of a large number of so-called duplicates to private buyers, in particular the art dealers Arthur Speyer (1859–1923) and Arthur Speyer Jr. (1894–1958). Through the latter, the ethnographic museums of Geneva, Neuchâtel, and Burgdorf all acquired feather mosaics.



Nevertheless, the bulk of Thurnwald's collection today remains in the Ethnographic Museum of Berlin. A more detailed account of the trajectories of the Berlin feather mosaics is discussed elsewhere (Boissonnas 2018).

Fedor Fiebig (fig. 7), a machinist for the shipping company Norddeutscher Lloyd, was hired by the Kaiserin-Augusta-Fluss-Expedition in 1912 after their previous machinist died from sun stroke (*The Geographical Journal* 1913: 170). He was a constant companion to the expedition members and spent much time with Thurnwald witnessing the barter for artifacts on a daily basis.



FIG. 6 (above left): The men's house of Kambot village. On the right of the back wall is the entrance to the room where sacred objects such as feather mosaics were stored. From Thurnwald 1917: 165, fig. 17.

FIG. 7 (left): Fedor Fiebig surrounded by men from Tjamangai. Photograph by Richard Thurnwald. Thurnwald, R., 1917: 154, fig. 3.

FIG. 8 (below left): Fr. Franz Kirschbaum with three local boys in front of the mission station of Tumleo, the first SVD mission in New Guinea, founded in 1869. Photo Archive, SVD General Archive, Rome.



After the internment of Thurnwald in 1915, Fiebig slipped away and set up camp in Angoram village (Schindlbeck 2012: 112). From there he started to collect artifacts that he sold to collectors in Dutch New Guinea, where he resided after the war until his premature death in 1922. Four feather mosaics collected by him found their way to the Museum of Den Haag and another ten to the British Museum.

In 1913 and 1914, the Swedish diplomat Karl Birger Mörner (1867–1930) sojourned on the Sepik and collected two feather mosaics that he later donated to the *Världskulturmuseerna* in



FIG. 9 (right): Panel-shaped feather mosaic.

Keram River, Papua New Guinea. Before 1925.

Wood, feathers, bast, paper.

H: 132 cm.

Collected by Fr. Franz Kirschbaum, 1925 or before.

Ethnological Museum, Musei Vaticani, inv. 110.726.

Photo: D. Pivato.



FIG. 10 (far right): Panel-shaped feather mosaic.

Keram River, Papua New Guinea. Before 1936.

Wood, feathers, bast. H: 94 cm.

Collected by Ernest John (E. J.)

Wauchope before 1936.

Australian Museum, Sydney, inv. E46390.

Photo: S. Florek.



FIG. 11 (left): Panel-shaped feather mosaic. Keram River, Papua New Guinea. Before 1915. Wood, feathers, bast. H: 143 cm. Collected by Richard Thurnwald. Völkerkundemuseum Burgdorf, inv. 4016. Photo: S. Zurkinden.



FIG. 12 (above): Panel-shaped feather mosaic. Keram River, Papua New Guinea. Before 1925. Wood, feathers, bast. H: 125 cm. Collected by Fr. Franz Kirschbaum, 1925. Museum of Archaeology and Anthropology, University of Cambridge, inv. 1930.493. Photo: J. Murfitt.



FIG. 13 (third from left): Panel-shaped feather mosaic. Keram River, Papua New Guinea. Before 1915. Wood, feathers, bast. H: 123 cm. Ethnologisches Museum der Staatlichen Museen zu Berlin-Preußischer Kulturbesitz, inv. VI 38600. Photo: M. Franken.

FIG. 14 (left): Panel-shaped feather mosaic. Keram River, Papua New Guinea. Before 1925. Wood, feathers, bast. H: 110 cm. Collected by Fr. Franz Kirschbaum, 1925. Museum of Archaeology and Anthropology, University of Cambridge, inv. 1930.495. Photo: J. Murfitt.

FIG. 15 (right): Panel-shaped feather mosaic. Keram River, Papua New Guinea. Before 1925. Wood, feathers, bast. H: 125.6 cm. Collected by Fr. Franz Kirschbaum, 1925. Museum of Archaeology and Anthropology, University of Cambridge, inv. 1930.494. Photo: J. Murfitt.

FIGS. 16a and b (far right): Panel-shaped feather mosaics arranged in front of a wooden structure, possibly a mission station. Photographer unknown. Before 1922.

Helen Dennett Archive. *The first feather mosaic in 16a also appears in a photograph of feather mosaics and ancestor plaques from the Keram area published by Fr Bruno Hagspiel (SVD) in his travel account Along the Mission Trail: III. In New Guinea published in 1926, which details his travels with Superior General William Gier (SVD) in Papua New Guinea in 1922.*

Stockholm. It is not clear if he was in contact with the Berlin expedition that was collecting on the Sepik at the same time.

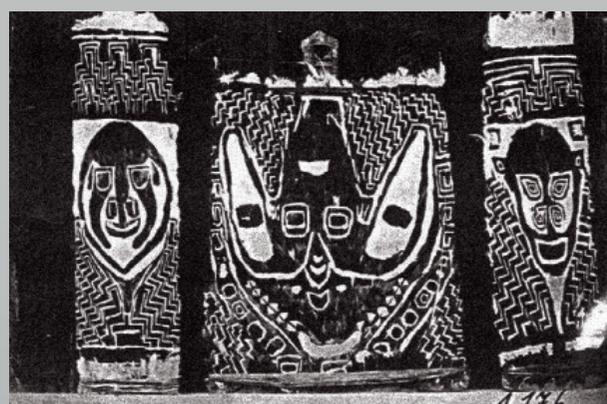
Pater Franz Kirschbaum (1882–1939), a young missionary from the Roman Catholic mission of the Society of the Divine Word from Steyl (Societas Verbi Divini, abbreviated SVD), arrived in New Guinea in 1907 on the island of Tumbleo, the missionary headquarters of the SVD (fig. 8). His background as a linguist and his studies in anthropology made him the ideal candidate to explore the region looking for potential locations for new mission stations. In 1907, he founded the mission station of St. Gabriel, west of Aitape, and in 1913, the first inland station of Marienberg on the Sepik (Steffen 2014: 789). Over the years, Kirschbaum developed a profound knowledge of the local population, their traditions, and their myths. On his many exploration trips along the Sepik and its tributaries, he collected a vast number of

Bateson (1904–1980) passed through the area five years later, he was asked by Kirschbaum to send eighteen of the mosaics to Rome, and until 1962 many of these feather mosaics were exhibited in a showcase of the Lateran Palace next to a reconstructed men's house (Piepke 2012: 561, fig. 2). The remaining four examples from this group were given by Kirschbaum to Bateson, who sent them to the Museum of Archaeology and Anthropology in Cambridge, where they remain today.

DECLINE IN PRODUCTION

When Cornelius Crane from the Field Museum of Natural History in Chicago visited the villages of Kambaramba, Gorogopa, and Geketen with Father Kirschbaum in 1929, none of the feather mosaics that had previously been documented by Kirschbaum were still in existence.

In 1930, Patrol Officer John Keith McCarthy witnessed the use of feather mosaics on the up-



artifacts. The Kirschbaum Collection at the Ethnological Museum of the Vatican numbers more than 850 pieces (Piepke 2012: 561), but many more were probably sent to local SVD museums in Holland, Germany, Austria, and the US. The Missiemuseum in Steyl, Netherlands, still houses seven feather mosaics that entered the collection before 1929 and were likely collected by Kirschbaum. From 1915 to 1916, he collaborated with Thurnwald on research projects in Marienberg station, where the latter was being held under house arrest by the Australians.

In 1925, Kirschbaum purchased twenty-two feather mosaics in the village of Panyiten (Panyaten) on the upper Keram River but lacked the funds to send them to Rome. When Gregory

per Yuat. Unlike the Keram mosaics that were secured with bast-fiber bands, these cut feathers were assembled with a tree gum. The finished boards were then assembled in the men's house to a large-scale screen of approximately three-by-two meters. When McCarthy returned to these villages some years later, he was told by the local men that missionaries had destroyed all mosaics, as they considered them to be pagan (McCarthy 1963: 64–65).

In 1935, the plantation owner and dealer in curios Ernest John (E. J.) Wauchope (1889–1969) was requested by the Australian Museum to purchase artifacts for their collection. The last five feather mosaics known to have left New Guinea were shipped to Sydney in 1936 (Aus-



tralian Museum, Wauchope letter 27.5.1936). At the time, Wauchope deplored the presence in the villages of the many missionaries, who forbade the locals to continue to produce traditional crafts (Australian Museum, Wauchope letter 29.8.1938). It seems that by the 1930s the traditional motivation to produce feather mosaics had come to an end, as Keram River cultures changed due to increasingly sustained contact with outsiders under the Australian Civil Administration.

SHAPES AND TYPES

The 151 surviving feather mosaics in museums in Europe and Australia can be divided into two categories: panel-shaped and paddle-shaped mosaics. The panel-shaped ones vary in height from 42 to 152 cm, with an average height of 120 cm. Their width varies between 13 and 52 cm, but the majority are in the range of 20 to 30 cm. It is quite likely that these boards were cut from old canoe walls. Most are of squarish shape and some are narrower toward the top. Quite a few of these panels have a suspension hole on top or notches that allow them to be attached to a support with cane loops.

Panel-shaped feather mosaics frequently depict the faces of spirits. According to Kambot elders, they represent spirits such as Deman (fig. 9) or Konyim (fig. 10) (Cox 2016). Various panels are decorated with depictions of animals, such as cockatoos, crowned pigeons, cassowaries, fishes, snakes, and marsupials. Figures 16a and 16b show two photographs of exceptional feather mosaic panels, most likely taken outside a missionary station before 1922, showing feather mosaic panels. None of these panels can be traced to existing museum collections. The rectangular panel in the center of figure 16b shows the war spirit Mumbwan, whose mask is attached to canoe prows during raids. Some of the figures wear a nose ornament made from shell that identifies them as important ancestors, particularly the ancestor Mopul, who is often depicted with a nose ornament (Dennett 2018). Feather mosaics are closely related to sago spathe paintings, which were being produced at the same time. Today, Kambot elders believe that sago spathe paintings replaced the feather mosaics after their production ceased (Cox

2016). From the records of the Berlin and Vatican museums, we know that panel-shaped mosaics were collected in the villages of Geketen, Kambot, Panyiten, and Kambaramba.

Paddle-shaped mosaics are composed of a round staff that terminates in a flattened lenticular blade. Except for the last 10 cm of the blade, the front of the blade and the entire handle are decorated with feather mosaics. Their length ranges between 83 and 198 cm, and one-third of known examples are between 140 and 160 cm. Most paddle-shaped mosaics have purely geometric motifs, though a few have one or two spirit faces woven into the overall design (figs. 20 and 21). No animal depictions are present on this mosaic type. Thurnwald collected paddle-shaped mosaics in the villages of Angarep, Gorogopa, Gabumonum, Tuyburum, Tyambo-to, Garep, and Kambaramba.

TECHNICAL ASPECTS

The restoration project of the mosaic panel MVB 4016 from the Burgdorf collection (fig. 11) at the Haute-Ecole Arc in Neuchâtel was a unique opportunity to study the technical aspects of these artworks in more detail (Michellod 2015).

The wooden panels used for the mosaics were sometimes charred on the surface in order to make them less vulnerable to insects. Just one panel mosaic could require up to a thousand feathers from a variety of local birds. Thurnwald describes the use of feathers from the black cockatoo, the kingfisher, and the crane (Thurnwald 1917: 170). Aside from non-identifiable dark brown feathers, the Burgdorf mosaic contains down and wing feathers of the sulphur-crested cockatoo (*Cacatua galerita*), black-dotted blue feathers of the Victoria crowned pigeon (*Goura victoria*), brown and blue feathers from the blue bird-of-paradise (*Paradisaea rudolphi*), as well as blue, red, and green feathers from the Eclectus parrot (*Eclectus roratus*) (Michellod 2015: 25–32). Four recently restored mosaic panels from the Vatican collection similarly contain feathers of the sulphur-crested cockatoo, Eclectus parrot, and Victoria crowned pigeon, but also from the northern dwarf cassowary (*Casuarius unappendiculatus* or *bennetti*), an unspecified species of hawk (*Accipiter*), the purple swamphen (*Porphyrio porphyrio*), the common and Stephan's

Left to right:

FIG. 17: Paddle-shaped feather mosaic with geometric pattern. Keram River, Papua New Guinea. Before 1915.

Wood, feathers, bast. H: 179 cm. Collected by Richard Thurnwald. Musée d'Ethnographie de Genève, inv. 009743. Photo: J. Watts.

FIG. 18: Paddle-shaped feather mosaic with geometric pattern. Keram River, Papua New Guinea. Before 1915.

Wood, feathers, bast. H: 182 cm. Collected by Richard Thurnwald. Ethnologisches Museum der Staatlichen Museen zu Berlin – Preußischer Kulturbesitz, inv. VI 38602. Photo: P. Jacob.

FIG. 19: Paddle-shaped feather mosaic with geometric pattern. Keram River, Papua New Guinea. Before 1915.

Wood, feathers, bast. H: 120 cm. Collected by Richard Thurnwald. Ethnologisches Museum der Staatlichen Museen zu Berlin – Preußischer Kulturbesitz, inv. VI 38598. Photo: P. Jacob.

FIG. 20: Paddle-shaped feather mosaic with broken handle and stylized face. Keram River, Papua New Guinea. Before 1915.

Wood, feathers, bast. H: 165 cm. Collected by Richard Thurnwald. Ethnologisches Museum der Staatlichen Museen zu Berlin – Preußischer Kulturbesitz, inv. VI 38596. Photo: P. Jacob.



FIG. 21 (above, second from right): Paddle-shaped feather mosaic with stylized face. Keram River, Papua New Guinea. Before 1915.

Wood, feathers, bast. H: 155 cm. Collected by Richard Thurnwald. Ethnologisches Museum der Staatlichen Museen zu Berlin – Preußischer Kulturbesitz, inv. VI 38597. Photo: P. Jacob.

FIG. 22 (above right): Paddle-shaped feather mosaic. Keram River, Papua New Guinea. Before 1915.

Wood, feathers, bast. H: 105 cm. Collected by Richard Thurnwald. Ethnologisches Museum der Staatlichen Museen zu Berlin – Preußischer Kulturbesitz, inv. VI 40885. Photo: P. Jacob.

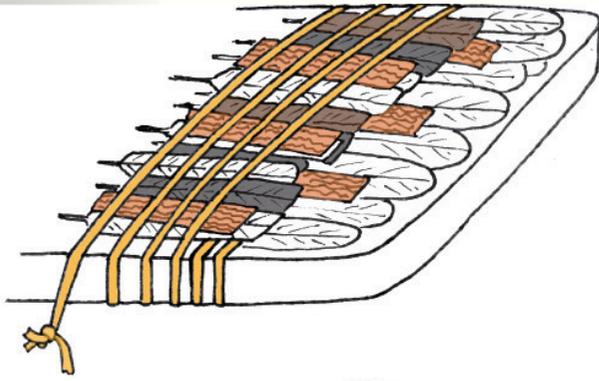


FIG. 23 (top): A schematic representation of the first two rows of feathers that are being fastened to the wooden support with a bast strip. Also visible are cut and dyed bast fiber strips.
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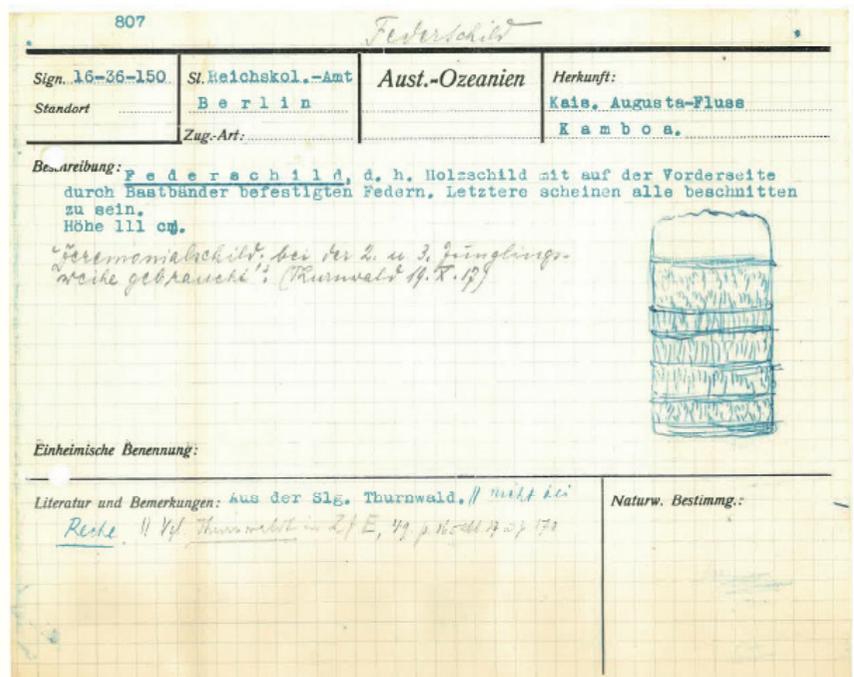
FIG. 24 (above): A row of feathers after having been flipped over. One can see the grey feathers that were used for cushioning the top cut feathers as well as the dyed bast fibers.
Photo: L. Michellod, Haute-Ecole Arc.

FIG. 25 (right): Inventory card from the panel-shaped feather mosaic 16-36-150 from the Museum Fünf Kontinente München. Courtesy of the Museum Fünf Kontinente, Munich.

FIG. 26 (facing page): The feather mosaics of the men's house of Geketen. Photograph by Fr. Franz Kirschbaum. Historisches Photo Archive, Rautenstrauch-Joest-Museum – Cultures of the World, Cologne, inv. 3344D.

emerald dove (*Chalcophaps indica* and *stephani*), and the Torresian crow (*Corvus orru*) (Brunori et al. 2017). Rectangular cut strips of bast fiber that were dyed red-brown also served as a distinctive element and were placed amidst the cut feathers (fig. 23).

Feather mosaics were constructed by laying down row after row of feathers from the top to the bottom of the wooden support. Each row consists of a thick cushion of smaller brown or black feathers that were covered by the cut and colorful top feathers which would become the actual mosaic (fig. 24). A strip of bast fiber (*Hibiscus tiliaceus*) would then be wrapped several times around the lower part of the row pressing the feathers against the board. The next row of feathers would then be laid down covering the lower end of the feathers and bast fiber of the previous row. Only at the very bottom would the fiber wrapping remain visible as it secured the last row to the support. To obtain a single long bast strip, several of them would be knotted together, making sure that the knots were always on the non-visible back side of the board. As such, a feather mosaic had to be made in one go, always keeping up the tension of the bast strip until the last row of feathers had been laid down. On some panel-shaped mosaics, the strips have been lashed together on the back of the panel, most likely a later intervention to tighten them after they had become loose over



time. This clearly shows that the feather mosaics were considered precious assemblages that were carefully preserved and maintained, unlike dance costumes that were disassembled after use.

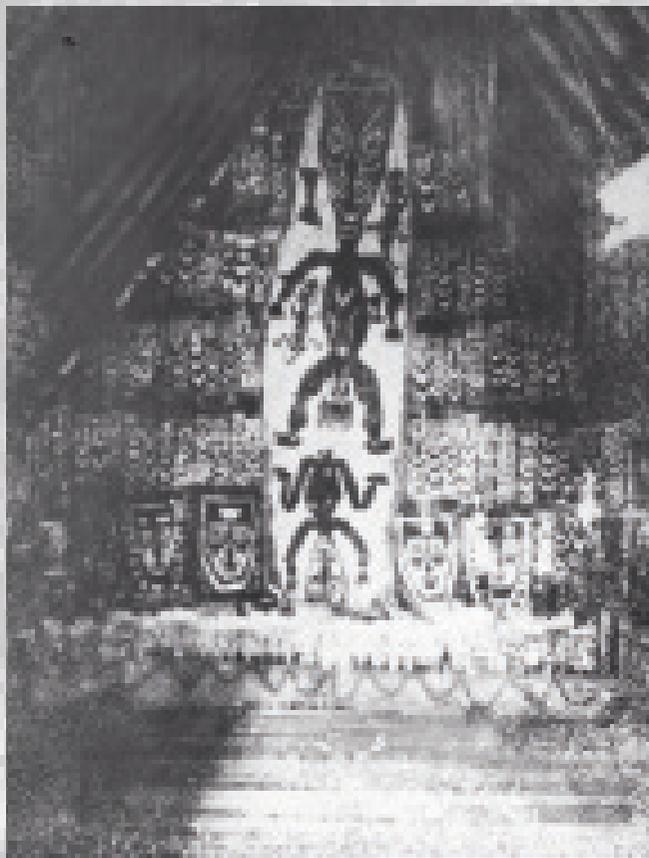
The making of a single mosaic panel required the collection of more than a thousand different bird feathers. Composing feather mosaics was the work of specialist craftsmen who also had the ritual and technical skills that ensured the efficiency and physical stability of the finished object. The assembly of the mosaic, however, was a group effort, as several people were needed to stabilize the wooden support, arrange the feathers, and tie the bast strip that needed to be kept under tension until the last row had been placed. These assemblages, while of fragile materials, were intended to last and, when not in use, were carefully wrapped in sago leaves.

Most feather mosaics were directly composed on the wooden support. One panel mosaic in the collection of the Australian Museum and another in the Vatican Museum have a drawing beneath the mosaic which may have helped with the organization of the feathers (fig. 10). The well-published but heavily restored Berlin mosaic VI 38609 has a line drawing of the figure on the back of the board. It is likely that for complex mosaics, line drawings were used on the support itself or as a visual aid on another panel.

INDIGENOUS TERMINOLOGY

Most likely referring to Thurnwald's notes, in *Kunst vom Sepik* Heinz Kelm mentions two indigenous names for feather mosaics: the term *bang*, used more generally on the Keram River, and *moarang*, as used in the village of Kambaramba (Kelm 1968, 29). The Vatican panel-shaped mosaics from Panyiten are described as *molon*. Both *moarang* and *molon* could relate to the term *morong* that is still used nowadays on the Sepik to describe things that have been

made from recycled canoe boards (Cox 2016). As mentioned before, the width and thickness of the panel-shaped mosaics are similar to old canoe walls. In the Lindenmuseum inventory, panel-shaped mosaics are described as *Federmosaik* (feather mosaic) or *Tanzschild* (dance shield), whereas the two paddle-shaped mosaics are inventoried as *Tanzschild (bang)* (dance shield (*bang*)). It is a possibility that the term *bang* was reserved for the paddle-shaped mosaics. Keram people use the term *bang* to designate “long way/distance.” In relation to feather mosaics, this could relate to the ability of feathers to bridge the divide between the human and spiritual realms. Nowadays, Keram people use the more prosaic term *angop wai* (feather shield) when speaking of their forefathers, feather mosaics (Colombo 2016).



CULTURAL CONTEXT

Thurnwald first mentions feather mosaics in his report of 1917 (Thurnwald 1917: 170), where he describes them as *Federschilde* (feather shields/panels) and discusses them in the general context of shields. Nevertheless, he clearly refers to them as ceremonial objects. He attributes their function as memory aids standing at the crossroad where diverging images have formed. He further describes them as histograms that contain entire stories and myths (Thurnwald cited from Kelm 1968: 28–29, translation by the author). A handwritten note on the inventory card from the Munich panel-shaped mosaic 16-36-150 (fig. 25) relates to oral information that was provided by Thurnwald on his visit on October 19, 1917. According to this previously unpublished note, the feather mosaics were used in the second and third initiation ceremonies of young men.

The only in situ photograph of panel-shaped mosaics was made by Father Kirschbaum in the men's house of Geketen (fig. 26). It shows

a central panel that is attached to a wall and reaches all the way up to the ridge of the roof. On it two mythological figures are depicted surrounded by lizards and what could be interpreted as *kundu* drums. To the left and right of this panel, feather mosaics are also attached to the wall. The first row shows four panel mosaics with large spirit faces. The upper rows consist of smaller panels with a face on top, while the rest is decorated with geometric patterns. Despite their small size, it is clear that these also are of the panel-shaped type.

Paddle-shaped feather mosaics (figs. 17–22) were not made to be hung from a wall, as they lack any suspension system. Feathers cover the entire circumference of the upper round staff, and it is only in this area that red parrot feathers were included in any of the mosaics. Given the particularly charged nature of this color in New Guinea societies, it is tempting to think that they were held at this place during ceremonies. Unlike most panel-shaped mosaics, which were decorated with feathers from top to bottom, paddle-shaped mosaics never have the lower 10 cm covered. The fact that the wood on this tip of the paddle is often crushed and that mud residue can be found only in this area indicates that paddle-shaped mosaics were used outside of the men's house and were at times resting on the ground. When the new display of the Ethnographic Museum of Berlin opened in 1926, one showcase displayed a mannequin of a masked Keram dancer with two paddle-shaped mosaics, one tucked into the crook of each arm (Schindlbeck 2012: 41, fig. 10). Though somewhat awkwardly rendered, this configuration is similar to Damur dancers from the lower Ramu, who also danced with a pair of sticks (Smidt and Eoe 1999: 121). The variety of lengths of paddle-shaped mosaics could indicate that they were made for individual dancers. The fact that so many of them were collected makes it likely that they were used in pairs. Thurnwald collected paddle-shaped mosaics in the villages

of Angarep, Gorogopa, Gabumonum, Tuyburum, Tyamboto, Garep, and Kambaramba.

Paddle-shaped feather mosaics have a strong visual affinity to ceremonial spears called *karkar* used in the Murik Lagoon. They represent the children of the founding mother, Areke (Somare 1974: 32). The pointed blade of the *karkar* is identical in shape to the paddle-shaped mosaics but is carved in relief and painted. On the top of the blade, a spirit face is represented, and the rest of the blade is carved in geometric patterns, except for the last 10 cm—just like paddle-shaped mosaics. The shaft above the blade is similarly covered with feather mosaics that also incorporate red parrot feathers or, like ex-



FIG. 27 (below): Four dancers performing in front of men, women, and children of Kambot (Ambot) village. Photo by Fr. Franz Kirschbaum. Historical Photo Archive, Rautenstrauch-Joest-Museum – Cultures of the World, Cologne, inv. 3357D.

amples in the Steyl Missiemuseum collection, pieces of red textile cloth. *Karkar* were individually named after spirits and were associated with war and the killing of enemies (Peltier 2015: cat. 109). They were powerful artifacts that were not shown publicly but carefully stored in the men's house with other sacred items. Very few were ever sold to collectors, as they are instrumental to the well-being of the clan.

CONCLUSION

Feather mosaics from the Keram River have so far received very little attention in the literature. This is most likely due to their rarity and to the

scant information gathered by the field collectors in the early twentieth century. After a century of storage in museums in Europe and Australia, most examples have become exceptionally fragile and many of these feather assemblages have been damaged.

This survey has identified two different types of feather mosaics that are designated either as panel shaped or paddle shaped. Panel-shaped mosaics were used for initiation ceremonies of young men inside the men's ceremonial house, where they were assembled into large-scale mosaics that covered part of or the entire back wall. Not unlike carved and painted church façades in medieval Europe, these feather mosaics represented sacred images illustrating stories and myths that became an integral part of young men's spiritual education.

Paddle-shaped feather mosaics are three-dimensional assemblages that were not made to be hung on a wall. Use-wear evidence points to an outdoor use, possibly in connection with masked dances. These would have been performed outside the men's house and most likely witnessed by the entire community (fig. 27). These paddle-shaped mosaics lack the complex figural designs of the initiation panels, and their close resemblance to *karkar*, ceremonial spears from the Murik Lagoon, may suggest they were used in similar war preparation ceremonies.

In 1913, feather mosaics were readily traded to anthropologist Richard Thurnwald for metal tools that were already known by the villagers from previous visitors. The large number of mosaics that were traded within a very short period indicates that at that time they were no longer considered inalienable and could be exchanged as commodities. Under the increasing influence of Christian missionaries, remaining feather mosaics were either sold or discarded. Unlike wood carving or pottery making, the specialist skills and knowledge for making feather mosaics disappeared completely. While feather mosaics still remain in today's collective memory of Keram elders, none have been produced for generations.

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