

Traditional cultural knowledge and archaeological analysis of a non-returning *wangim* (boomerang) from Wurundjeri Woi-wurrung Country, southeastern Australia



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ABSTRACT

Boomerangs are part of a suite of Australian throwing sticks, which are specialised wooden implements of purposeful design and aerodynamic properties that are used as projectiles. Throwing sticks are known to occur throughout Australia. However, they are less commonly found in buried contexts. Here we report on a non-returning wooden wangim (boomerang) recovered from a reported burial mound at Yarra Junction, east of Melbourne, Wurundjeri Woi-wurrung Country (Hayes et al. 2025).

Analysis of shape, size, wear and residues, combined with traditional cultural knowledge, indicates that the wangim was made and maintained using metal tools from the 19th century. The presence of impact traces, right-handed grip marks, blood, and charcoal indicates that the wangim had many purposes. The steps required to make and maintain this wangim, along with evidence for its continuous and varied use (throwing, hunting, fire management) and its association with a reported burial, suggest that it was an object of prestige and strong personal attachment. This study sheds light on boomerangs in southeastern Australia, and is the first of its kind to combine traditional cultural knowledge and archaeological analysis of a boomerang.



Figure 1: Both surfaces of the Yarra Junction *wangim* (boomerang) (credit: Zara Lasky-Davison)



Figure 3: Left to right – Richard Fullagar, Elder Ron Jones, Elder Allan Wandin, Elder Bob Mullins inspecting the *wangim* (credit: Caroline Spry)

METHODS

The braiding of Wurundjeri Woi-wurrung traditional cultural knowledge and archaeological techniques is essential for holistically understanding Wurundjeri Woi-wurrung cultural heritage and values (e.g. Spry et al. 2025). Wurundjeri Woi-wurrung Elder Bob Mullins examined the Yarra Junction *wangim* at the Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation office in 2021 and provided his opinion on how a Woi-wurrung-speaking *liwik* (Ancestor) created it, based on his own experiences of making wooden implements including *wangim*.

The *wangim* was examined and non-invasively sampled at Museums Victoria's Merri-bek Facility (Cultural Heritage Permit WTP062). The *wangim* was subject to low-magnification screening, high-magnification analysis of use wear preserved in a polyvinyl siloxane (PVS) impression, and high-magnification analysis of extracted residues. The size and shape of the *wangim* was also compared to other examples from Wurundjeri Woi-wurrung Country in Museums Victoria collections.



RESULTS

Elder Bob Mullins made the following observations about how the *wangim* was probably made:

- 1) A *liwik* (Ancestor) probably collected a piece of wood with a natural bend in it. Elder Bob collects wood for boomerangs from the roots of trees near rivers and creeks;
- 2) The *liwik* would have fashioned the rough shape of the boomerang. For dry wood (as opposed to green wood), the *liwik* probably soaked it in water to make it more malleable. Wet wood was usually dried out by slowly moving it backwards and forwards over a campfire to create and set the desired shape; and
- 3) The *liwik* would have used a series of metal tools to refine the boomerang. This suggests the *wangim* was made some time following colonisation, after the early to mid-nineteenth century. However, Elder Bob notes that the *wangim* has a rougher finish. He would have sanded the *wangim* as a final step to create a smoother finish.

Wear patterns on the *wangim* indicate grip marks by a right-handed *liwik*. They also reveal impact traces from when the *wangim* was thrown and came into contact with other (hard) items. Blood on the *wangim* highlights its role during hunting. Charcoal and fire marks may have resulted from using the boomerang to stoke a campfire, or from boomerang repair activities. The *wangim* was clearly an important item as evidenced by its continued repair and use, and burial with its owner. Boomerangs were, and continue to be, an important part of First Peoples' history and identity.

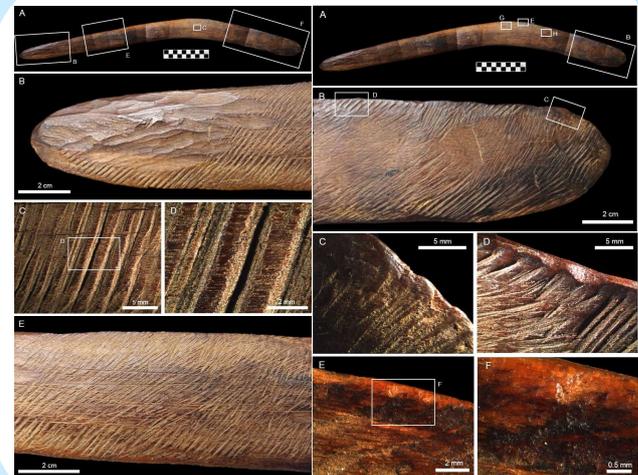


Figure 4: Left – wear patterns on the *wangim*, right – residues on the *wangim* including blood (credit: Elspeth Hayes and Richard Fullagar)

ACKNOWLEDGMENTS

We thank Clint Cooper for repatriating this *wangim* to Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation (WWCHAC) in 2021 and Raquel Kerr and the Ancestral Remains Unit at First Peoples-State Relations for facilitating this repatriation. We would like to thank Rob McWilliams (Museums Victoria) for accommodating our visit at Museums Victoria Merri-bek Facility, and Melanie Roberts (Museums Victoria) and John Duggan for providing advice on the *wangim*. We acknowledge Wurundjeri Woi-wurrung *liwik*, Elders, community members, and staff (including Garrick Hitchcock and Andrew Tanner). The artwork shown in this poster is by Wurundjeri Woi-wurrung *liwik* William Barak (courtesy of WWCHAC).

REFERENCES

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