

Rock art from at least 67,800 years ago in Sulawesi

Oktaviana, A.A., Joannes-Boyau, R., Hakim, B. *et al.*

The oldest minimum-age constraint we obtained is for a hand stencil (sample LMET2) from Liang Metanduno in Muna Island (Fig. 2). This motif is partly covered by ancient coralloid speleothems. This stencil is in a poor state of preservation, comprising only a 14×10 cm patch of faded pigment bearing a portion of the fingers and the adjoining palm area. The tip of one finger appears to have been artificially narrowed, either through the additional application of pigment or by moving the hand during pigment application, a distinct type of hand stencil art thus far identified only in Sulawesi. Dating results show that this stencil was produced at least 67.8 thousand years ago (ka) (71.6 ± 3.8 ka) (Fig. 3). An additional coralloid speleothem (denoted as LMET1) was sampled over another hand stencil located on the same panel 11 cm to the left of the previous one (Fig. 4). This motif is also partly covered over by ancient coralloid speleothems, with only a portion of the original stencil remaining in the form of a 14×9 cm area of sprayed pigment bearing negative impressions of three fingers. The pigment appears darker in colour than the other visible hand stencils on the panel. Sample LMET1 comprises two distinct pigment layers embedded within the calcium carbonate. The stratigraphically oldest pigment layer has a minimum date of 60.9 ka (70.5 ± 9.5 ka), whereas the second pigment layer has a minimum date of 21.5 ka (22.8 ± 1.3 ka) and a maximum date of 32.8 ka (30 ± 2.8 ka). Close inspection shows that the darker pigment overlies the lighter pigment on the visible portion of the image. The lighter pigment may correspond to an earlier hand stencil or represent residual sprayed pigment associated with the hand stencil sampled as LMET2. Alternatively, the lighter layer may be the remains of a different motif, now obscured or no longer visible, that predates the overlying pigment. Regardless, it is evident from LMET1 that two episodes of Pleistocene rock art production on this panel are separated by a period of at least 35 kyr. Finally, as the oldest narrow-fingered stencil previously dated yielded a minimum date of 17 ka, we may conclude that this regionally unique variant of stencil art is much older than previously thought.

Fig. 2: Dated rock art from Liang Metanduno.

