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FATHER FISH CARRY OTHER DADS' YOUNG — IN THEIR MOUTHS



A male 'mouth almighty' fish (*Glossamia aprion*).

Raising babies in your mouth is no guarantee that they're your own – as some Australian mouthbrooding fish can attest.

Males belonging to some species of river-dwelling fish guard their young by storing eggs and fry in a cavity in their mouths. But this behaviour takes its toll: brooding males cannot eat.

Scientists suspect that this taxing style of parenting is justified because it helps the males to guarantee that their kids are being cared for. To check whether males were raising just their own young, Janine Abecia at Charles Darwin University in Darwin, Australia, and her colleagues captured

broods from two species of mouthbrooding fish: the blue salmon catfish (*Neoarius graeffei*) and the mouth almighty (*Glossamia aprion*).

Genetic tests revealed that although blue salmon catfish were monogamous and raised their own offspring, around 25% of mouth almighty broods showed another approach. Some mouth almighty males raised offspring from multiple females, whereas others nurtured young from other males' broods.

This reveals that parentage in some mouthbrooding species is messier than was once thought, say the researchers.

Biol. Lett. **18**, 20210576 (2022)

OUTSIZE ANCIENT ARTWORKS HIDDEN IN ALABAMA CAVE

Some of the largest-known Native American cave art has been revealed with the help of 3D imaging, which uncovered figures spanning more than 2 metres in an Alabama cavern.

Jan Simek at the University of Tennessee, Knoxville, and his colleagues identified the images in a cave system known for the engravings on its mud walls. The 'mud glyphs' were inscribed on the ceiling of a cramped chamber whose height is rarely more than 125 centimetres – and often much less. Radiocarbon dating suggests that humans inhabited the cave well over 1,000 years ago.

To visualize the scope of the art, the researchers used a technique called photogrammetry, which builds a 3D model from thousands of photographs. The model allowed the mud glyphs to be viewed from a much wider vantage point than would otherwise have been possible, revealing giant images of human and animal-like figures and other forms that were not apparent to the naked eye in the cave.

Photogrammetry is often used to document cave art, but the researchers say that the technique could also help archaeologists to discover hidden evidence of human creativity.

Antiquity <https://doi.org/hs26> (2022)



COVID: LEVELS OF VIRUS SHED CAN DIFFER UP TO 60-FOLD

Daily testing at a university has revealed huge discrepancies in the infectiousness of people who test positive for SARS-CoV-2. This could help to explain why superspreading events – in which a few individuals infect many others – have a prominent role in the spread of the coronavirus.

Between late 2020 and early 2021, when Alpha and earlier variants dominated, Christopher Brooke at the University of Illinois at Urbana-Champaign and his colleagues identified 60 unvaccinated people at the university who tested positive for SARS-CoV-2. The researchers collected samples from the participants, who had mild or no symptoms, every day for up to two weeks.

They found substantial differences in the number of days for which participants shed virus capable of infection: one excreted viable virus from their nose for nine days, whereas nine participants had no detectable infectious virus throughout the testing period. Modelling estimated that the most infectious people shed more than 57 times more virus over the course of infection than did the least infectious.

Viral RNA levels peaked several days earlier in saliva than in the nose, and became undetectable two to three weeks later.

Nature Microbiol. **7**, 640–652 (2022)