



Sponge covered reef off Salomon atoll with

Left insert the sperm

Right insert the eggs

New life off Salomon atoll

On an early morning dive in February 2006 on Salomon's steep western reef, with exceptionally clear water, numerous palls of 'smoke' began to appear on the reef around the working divers. First a couple, then dozens appeared in synchronised fashion, like small fires on a hillside. The smoke turned out to be puffs of eggs and sperm coming from sponges, all, as far as could be seen, from the same species of sponge, probably of the genus *Agelas*. The adult sponges produced either eggs or sperm, none were seen producing both.

The left inset above shows the sperm—amorphous milky clouds—that wafted along in the slow current, and the right inset shows the eggs—clusters of tiny white spheres embedded in a stringy jelly matrix forming ribbons. These egg bundles stayed near their parent, entangled in the tendrils, in the sponge itself and in other surrounding life, awaiting their sperm.

The mass eruption all along the reef is clearly coordinated. It may be triggered by water-borne chemical signals, possibly released earlier or contained in the sperm clouds themselves. Or, it may all have been triggered by a combination of tide and daylight length, or even by moon phase, as is the case for many corals. The actual mechanism remains a mystery. Whatever the reason, synchrony by males and females is obviously necessary for fertilisation to take place.

Forty minutes later, it was all over.

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