

Fish with a placenta? How did evolution come up with that?

With their impressive fins and stunning colours, the poeciliids—a group of small fish that includes guppies, mollies and swordtails—are understandably popular in aquariums. Some have beautiful fan-shaped tails that look like flamenco dresses. Others resemble Kandinsky paintings given life.

But some poeciliids are rare in aquaria, because they are relatively drab—silver-and-black oddities in a family known for extravagance. They also tend to share another weird and less obvious trait: they have placentas.

Unlike most fish, which lay eggs, all poeciliids give birth to live young. Mothers nurture their offspring inside their own bodies. Some produce eggs, but keep them inside their ovaries until the young are ready to enter the world. Others have evolved organs that bring the mother's tissues so close to her baby's that she can pass nutrients over—in other words, a placenta. Anatomically, this organ is very different to the placentas that human mothers use to nourish their babies, but it does the same job.

Now, Pollux has shown that the rise of the placenta was accompanied by drastic changes in the bodies and lifestyles of the poeciliids. The species with these organs are less ornate. They lack obvious courtship rituals. The males tend to be smaller, but their genitals are bigger. And he thinks that this seemingly unrelated constellation of traits arose because the placenta radically changes the relationship between mothers and their developing young.

Read the full, original story: [Placenta evolution and a sexual Cold War](#)