

# Sea Gooseberry:

## An overlooked branch on the tree of life

### CREATURE FEATURE

The sea gooseberry, *Pleurobrachia bachei*, is a common sighting in our thrice-daily plankton tows. Like their tasty namesake, these comb jellies have small, round bodies with lines running top to bottom. These eight lines are featured on all species of comb jellies (or ctenophores), an often overlooked branch on the tree of life.

Each of the eight lines is a row of paddles, with each tiny paddle composed of a row of cilia (hair like appendages) that are fused into combs. In fact, the name ctenophore literally translates to “comb-bearer.” When these paddles are rapidly flapped, which is how the sea gooseberry, and all its ctenophore cousins, move through the water.

While they may resemble jellyfish, they’re as closely related to jellyfish as they are to us...not very closely at all. However, like jellyfish, they have clear gelatinous bodies, and radial symmetry (symmetrical without any midline, like a wheel), rather than bi-

lateral symmetry (symmetrical left and right sides). Like jellyfish they are also plankton – oceanic drifters not powerful enough to fight strong currents. I suppose we can’t blame scientists for placing the two groups on the same branch in the past.

But, recent genetic studies have shown that ctenophores’ nerve cells, or neurons, are fundamentally different from those found in all other animals, including jellyfish, ants, snails, fish, and us. What does that mean? Why do astrobiologists shake with glee when they learn about the strange ctenophores and their genetically distinct nerve cells?

Quite simply, it means that here on Earth, nerves have evolved separately at least twice. If the nervous system can evolve twice here, perhaps they can evolve anywhere there’s life – meaning intelligence may be possible anywhere in the universe that there is life.

So, keep looking up (and down)!



A Sea Gooseberry (top) and a land gooseberry (bottom). As you can see, they are practically indistinguishable. ; )

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