Spider bubble doubles air supply, and more, according to articles in ABC News in Science and BBC Nature News 9 June 2011, and ScienceDaily 13 June 2011. The diving bell spider *Argyron eta aquatic*
lives underwater in rivers and ponds, but breathes air. It lives, eats, mates and lays its eggs in a bubble of air held in a dome shaped web amongst the vegetation. The spider collects air from the surface and transports it to its underwater dome home in bubbles attached to fine hairs on its abdomen and rear legs. Scientists have now discovered the underwater bubble can absorb oxygen from the water and keep the spider supplied for a much longer period that if it only had the oxygen in each bubble it gathers from the surface.

Using a tiny oxygen-measuring device called an optode the scientists measured oxygen levels in the bubble and in the surrounding water and found oxygen was moving from the water into the bubble. They found up to eight times the amount of oxygen can go from the water into the bubble compared to what was initially present. However, the bubble eventually shrinks as nitrogen diffuses out of it into the water, and the spider must collect another air bubble from the surface to replenish it. In spite of the shrinkage, the oxygen absorbing property of the bubble enables the spider to stay submerged for a whole day, rather than the 20 to 40 minutes that biologists previously believed.

ABC , BBC , ScienceDaily

Editorial Comment: Making use of the physical properties of air and water so that you can live underwater and still have plenty of air to breath - amazing spider, eh? If we were to do it we would require an understanding of the chemistry and physics of water and air, followed by our brains planning and purposefully using the right equipment. When you ask why would a land dwelling spider somehow decide to live an underwater life, especially as it lays its eggs in its submarine home, it becomes obvious that if it wasn't fully equipped in advance to maintain the air bubble, there would be no next generation.

This provides a good illustration of our adage that there are plenty of theories and opinions that contradict everything in the creationist repertoire and even in the Biblical account – but the facts never do! You see it actually is far more logical to believe the spider was designed to be able to collect air, build the right shaped web and be pre-programmed with air-collecting and storing behaviour. It is utterly foolish to believe the spider worked this out by itself or mindless nature just did it somehow. (Ref. arachnids, design, aquatic)

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