

# Amphibious cycle

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An **amphibious cycle** is a human-powered vehicle capable of operation on both land and water. The design which has probably received the most coverage is *Saidullah's Bicycle*.<sup>[1][2]</sup> The bike uses four rectangular air filled floats for buoyancy, and is propelled using two fan blades which have been attached to the spokes. *Moraga's Cyclo Amphibious* <sup>[3]</sup> uses a simple tricycle frame to support three floaters which provide both the floatation and thrust. The wings on the powered wheels propel the vehicle in a similar way to a paddle wheel.

Another design is the SBK Engineering Shuttle-Bike. It consists of 2 inflatable floats with straps that allow the carrying of a bicycle with passenger. The ensemble, when deflated, fits in a backpack for carrying by the cyclist.<sup>[4]</sup>

Another amphibious vehicle, is that of seven engineering students at the University of Southampton.<sup>[5][6]</sup> The *Amphibious Cycle* combines a recumbent frame with separate floats, and is propelled using a paddle wheel. A speed test on water achieved an average speed of 1.12 m/s. The cyclist was able to transition the cycle both into and out of the water unassisted. This prototype has a real application in urban areas of flooding, as well as applications in the leisure industry.

An amphibious vehicle was created by five engineering students at Calvin College as a senior design project (May 2010). This vehicle improves upon previous designs by allowing smooth transition from water to land.<sup>[7]</sup>

Another recent design was developed by Ebrahim Hemmatnia for his voyage around the world. This velomobile was called the Melanie.<sup>[8][9]</sup>

## References

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- Moraga, E.O. (1969) 21 September 1971 *Cyclo Amphibious* US Patent 3,606,856.
- SBK Engineering Shuttle-bike (<http://www.gizmag.com/go/2505/>)
- Anthony Chesshire, David Edwards, Simon Halford, Joanna Hutchinson, Jack Marriott, Andrew Webster & Simon Wiles (2008) *Design Build and Test an Amphibious Cycle* School of Engineering Sciences, University of Southampton.
- featured in the Southern Daily Echo (5 June 2008) and The Daily Telegraph (6 June 2008)
- Calvin College amphibious vehicle ([https://knightvision.calvin.edu/bbcswebdav/orgs/ENGR/senior-projects/2009\\_10/team15/web/index.html](https://knightvision.calvin.edu/bbcswebdav/orgs/ENGR/senior-projects/2009_10/team15/web/index.html)) Archived ([https://web.archive.org/web/20120525080525/https://knightvision.calvin.edu/bbcswebdav/orgs/ENGR/senior-projects/2009\\_10/team15/web/index.html](https://web.archive.org/web/20120525080525/https://knightvision.calvin.edu/bbcswebdav/orgs/ENGR/senior-projects/2009_10/team15/web/index.html)) 25 May 2012 at the Wayback Machine.
- Ad Infinitum amphibious bicycle (<http://en.ligfiets.net/news/4235/persbericht-7th-international-velomobile-seminar-2012.html>)



Amphibious bike 'Cyclomer', Paris, 1932



The Ocean Biker, Ebrahim Hemmatnia in his boatbike, March 2015, João Pessoa, Brazil.

9. Ad Infinitum bicycle (<http://www.willpowered.nl/expeditie/>)

## External links

- Saidullah Amphibious Bicycle ([http://www.nif.org.in/?q=amphibious\\_cycle](http://www.nif.org.in/?q=amphibious_cycle)).
- Amphibious Cycle ([http://openarchitecturenetwork.org/projects/dlygad2\\_amphibiouscycle](http://openarchitecturenetwork.org/projects/dlygad2_amphibiouscycle))
- Amphibious Bicycle Concept (<http://www.gizmag.com/amphibious-bicycle-concept/9156/>).
- The DIY Amphibious Bike Rides the Water (<http://www.trendhunter.com/trends/diy-amphibious-bike>)

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