Phase 3: A High Performance Rowing Oar with Design Inspired by Biomimicry

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Over the 172 years since rowing originated as a sport, equipment has slowly progressed to allow potential for improved performance. There have been two predominant phases in this ‘progression’, and my oar will hopefully pioneer phase 3 with the new innovative use of biomimicry. Phase one included oars made completely from wood and wood laminates, and phase two consists of oars made from synthetic materials like carbon fibre. In the past 28 years designs have been changing at an ever slowing rate, shown through times not improving as fast as before. This is why I want to make an oar to pioneer a new phase to start the improvement of times again. I have successfully designed and created my oar by conducting in depth research and essential prototyping to ensure I would get the best final result. Through extensive testing I have observed positive results, specifically, an improvement of 14.4 seconds over 2000m (standard olympic distance), from my new oar over a standard existing oar. Thus, I can conclude that I have achieved my aim of creating a more hydro and aerodynamic oar to increase performance potential. A success not only confined to rowing, but hinting the potential of advancement that can be achieved in any field with the aid of biomimicry.

Awards Won:

Second Award of $1,500

Patent and Trademark Office Society: Second Award of $500