Summary of Relevant Literature Data

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| **S No** | **Paper** | **Summary** |
| 1 | Adrian L R Thomas\_Intermittent gliding flight in the pipistrelle bat | Nothing great to add |
| 2 | Adrian L R Thomas\_Why do Birds have Tails The Tail as a Drag Reducing Flap and Trim Control | Birds: Induced drag is predominant at low speeds and during turning flight, while profile drag is significant at high speeds. Tails are known to reduce induced drag, in which the wing + tail configuration reduces this compared to a wing-only configuration. Tail usage is observed to play a crucial role in low speed flight, while it is minimal in steady level flight (high speed flight). |
| 3 | Adrian L. R. Thomas (1993). On the Aerodynamics of Birds' Tails. | Aerodynamics prediction for birds’ tails – did not use this |
| 4 | Adrian L.R Thomas, Robert Nudds\_Flying and swimming animals cruise at a Strouhal number tuned for high power efficiency | Efficient Strouhal’s numbers - Propulsive efficiency is high over a narrow range of St and usually peaks within the interval 0.2 < St < 0.4 |
| 5 | Alex M. Moodie, Gallaher\_Conceptual Design of a Man-Portable Ornithopter | A comparison of fixed-wing aircraft and an Ornithopter is made based on design numbers. Has a mission profile. A strongly statistical weight estimation, followed by an aerodynamic performance model is developed. Mainly performs studies on the efficiency improvement in comparison to fixed wing model. |
| 6 | Alireza Ramezani\_Bat Bot (B2), a biologically inspired flying machine | Compares dimensions to that of bat, presents the development and results of a novel wing mechanism and couples the aerodynamics and control using mathematical models, all inspired from bats. Reports the results of preliminary flight – experimentation. |
| 7 | Ang Chen, Bifeng Song\_Novel Actuation Strategy for an agile FWMAV performing a morphing-coupled wingbeat pattern | Develops a novel flapping mechanism for RoboFalcon FWAV that couples morphing and flapping during flapping and decouples then during maneuver flights – mainly wing design. Aerodynamics and agility tested using experimentation. |