

Errata in Bicycling Science fourth edition

Basal Metabolism

Page 82:

...The Mifflin-St. Jeor equation gives BMR in kilocalories per day as $(10 \times \text{weight in kilograms}) + (0.0625 \times \text{height in meters}) - (5 \times \text{age in years}) + 5$ (for men) or -161 (for women). should be ... $(625 \times \text{height in meters})$...

Pure-Gravity Records

Page 139:

The root symbol should include h and g

...The end-speed of a frictionless fall would be $v = \sqrt{2 h g}$ or slightly over 34 m/s (~ 123 km/h ~ 76 mph)...

Gravity-Tolerated or -Assisted Records

Page 142:

...a much lower *average* speed at 27.6 km/h, but of course a much... should be

...a much lower *average* speed at 29.3 km/h, but of course a much...

Air Resistance

Page 173:

... whereas more rounded bodies like a sphere or a pointed cone experience only about half the drag for the same cross section A (see also figure 5.8)... should be

... whereas more rounded bodies like a sphere or a pointed cone experience only about half the drag for the same cross section A (see also figure 5.9)...

Page 176:

... $(1 + s^2)^{-1/2}$ should be

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Airfoil Sections for Struts and Fairings

Page 229:

... improvement in the drag coefficient C_D And make C_D values higher... should be:

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Hull Efficiency

Page 503:

...Or if the human "engine" is treated as a fuel cell with 20 percent efficiency and a basic metabolic

rate of 450 W (food) input is subtracted, an energy-cost L/D ratio greater than 200:1 is still attained (see figure 10.25)... should be:

...Or if the human "engine" is treated as a fuel cell with 25 percent efficiency and a basic metabolic rate of 100 W (food) input is included, an energy-cost L/D ratio greater than 300:1 is still attained (see figure 10.25)...

Figure 10.25 has therefore also changed slightly. See the new one in the spreadsheet [https://hupi.org/BS4/Spreadsheets/Fig10.25\(Drag2withL2D\)new.ods](https://hupi.org/BS4/Spreadsheets/Fig10.25(Drag2withL2D)new.ods) and in the caption

... (pulled from land with a rope or winched) at 500 W (2,500 W food input). should be:

... (pulled from land with a rope or winched) at 500 W (2,100 W food input).

Human-Powered Submarines

Page 507:

... Historically, human-powered naval submarines were built as pressure vessels containing air. The very first such submersible, the famous Turtle of 1775, was powered by one man... should be:

... Historically, human-powered naval submarines were built as pressure vessels containing air. The famous Turtle of 1775 was powered by one man. ...

Background: The first such submersible was the Falconet-Ship of 1772, designed by [Jakob Praetorius](#), apparently a smaller version of his never constructed [Steinhuder Hecht](#). It was human-powered by means of an apparently ineffective vertical fin, a single 12-minute submersal being recorded.

Erich Grasdorf: „Laengst praemeditiret und kein flüchtiger Gedancke“ - Vom ersten Unterseeboot, 1762 für den Siebenjährigen Kreig ersonnen und 1772 als Muskelkraftfahrzeug gebaut. Die Weltwoche Nr. 49, 3. December 1992.

[Timm Weski: Hippopotame and Schaumburger or Steinhuder Hecht. An Amphibious Craft and a Submarine from the 18th century. The Mariner's Mirror 88, 2002, 271 – 284.](#)

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Page 551:

Missing entry: Suspension, 182-187