

Species	CFF	Mg	qWg	Brain Mass	Light levels
<i>Ambystoma tigrinum</i>	30 <sup>e,s,1</sup>	10.78 <sup>28</sup>	0.00016 <sup>28</sup>	NA	L
<i>Anguilla anguilla</i>	14 <sup>b,s,2</sup>	71.1 <sup>28</sup>	0.00013 <sup>28</sup>	NA	L
<i>Anolis cristatellus</i>	70 <sup>e,o,3</sup>	6.0 <sup>29</sup>	0.00089 <sup>29</sup>	NA	H
<i>Asio flammeus</i>	70 <sup>e,o,4</sup>	406.0 <sup>30</sup>	0.0032 <sup>28</sup>	5.45 <sup>69</sup>	H
<i>Bubo virginianus</i>	45 <sup>e,s,5</sup>	1450.0 <sup>31</sup>	0.0036 <sup>28</sup>	13.7 <sup>70</sup>	L
<i>Canis lupus familiaris</i>	80 <sup>b,s,6</sup>	13900.0 <sup>32</sup>	0.00183 <sup>28</sup>	80.0 <sup>71</sup>	H
<i>Carassius auratus</i>	67.2 <sup>e,o,7</sup>	10.8 <sup>33</sup>	0.00013 <sup>28</sup>	0.01 <sup>71</sup>	H
<i>Carcharhinus acronotus</i>	18 <sup>e,o,8</sup>	14491.0 <sup>8</sup>	0.00114 <sup>56*</sup>	NA	L
<i>Caretta caretta</i>	40 <sup>e,s,9</sup>	135000.0 <sup>34</sup>	0.00008 <sup>57</sup>	2.7 <sup>40</sup>	H
<i>Cavia porcellus</i>	50 <sup>e,s,10</sup>	629.0 <sup>35</sup>	0.00306 <sup>35</sup>	3.8 <sup>72</sup>	L
<i>Chelonia mydas</i>	40 <sup>e,s,9</sup>	128000.0 <sup>36</sup>	0.00025 <sup>36</sup>	8.6 <sup>71</sup>	H
<i>Columba livia</i>	100 <sup>e,s,4</sup>	315.0 <sup>37</sup>	0.0045 <sup>28</sup>	2.3 <sup>70</sup>	H
<i>Dermochelys coriacea</i>	15 <sup>e,s,11</sup>	354000.0 <sup>38</sup>	0.00043 <sup>58</sup>	30.0 <sup>73</sup>	H
<i>Felis catus</i>	55 <sup>e,s,12</sup>	3054.4 <sup>32</sup>	0.00394 <sup>59</sup>	28.4 <sup>71</sup>	L
<i>Gallus gallus domesticus</i>	87 <sup>b,o,13</sup>	2710.0 <sup>39</sup>	0.0022 <sup>28</sup>	3.6 <sup>74</sup>	H
<i>Gekko gecko</i>	20 <sup>e,s,14</sup>	54.8 <sup>40</sup>	0.00034 <sup>28</sup>	0.2 <sup>75</sup>	L
<i>Homo sapiens</i>	60 <sup>b,o,15</sup>	67100.0 <sup>41</sup>	0.00117 <sup>60</sup>	1300.0 <sup>76</sup>	H
<i>Iguana iguana</i>	80 <sup>e,s,14</sup>	750.0 <sup>42</sup>	0.00029 <sup>28</sup>	0.61 <sup>75</sup>	H
<i>Macaca mulatta</i>	95 <sup>b,o,16</sup>	7710.0 <sup>43</sup>	0.00205 <sup>61</sup>	91.7 <sup>71</sup>	H
<i>Melopsittacus undulatus</i>	74.7 <sup>b,s,17</sup>	33.6 <sup>28</sup>	0.01204 <sup>28</sup>	1.5 <sup>70</sup>	H
<i>Negaprion brevirostris</i>	37 <sup>e,s,18</sup>	92987.0 <sup>44</sup>	0.00053 <sup>62*</sup>	NA	L
<i>Oncorhynchus mykiss</i>	27 <sup>b,s,19</sup>	4000.0 <sup>45</sup>	0.00041 <sup>28</sup>	0.5 <sup>71</sup>	L
<i>Oryzias latipes</i>	37.2 <sup>e,s,20</sup>	0.21 <sup>20</sup>	0.00072 <sup>28</sup>	0.01 <sup>77</sup>	L
<i>Pagophilus groenlandicus</i>	32.7 <sup>b,s,12</sup>	119600.0 <sup>46</sup>	0.00211 <sup>63</sup>	228.5 <sup>78</sup>	L
<i>Raja erinacea</i>	30 <sup>e,o,22</sup>	500.0 <sup>47</sup>	0.00024 <sup>47</sup>	2.32 <sup>71</sup>	L
<i>Rattus norvegicus</i>	39 <sup>e,o,23</sup>	237.0 <sup>48</sup>	0.00679 <sup>48</sup>	2.3 <sup>79</sup>	L
<i>Spermophilus lateralis</i>	120 <sup>e,o,10</sup>	215.5 <sup>49</sup>	0.00335 <sup>64</sup>	3.6 <sup>80</sup>	H
<i>Sphenodon punctatus</i>	45.6 <sup>b,s,24</sup>	353.75 <sup>50</sup>	0.00017 <sup>28</sup>	NA	L
<i>Sphyrna lewini</i>	27.3 <sup>e,o,8</sup>	1893.0 <sup>8, 51</sup>	0.0010 <sup>65*</sup>	60.0 <sup>77</sup>	L
<i>Sturnus vulgaris</i>	100 <sup>e,s,25</sup>	75.0 <sup>28</sup>	0.012 <sup>28</sup>	1.9 <sup>74</sup>	H
<i>Tamias amoenus</i>	100 <sup>e,o,10</sup>	51.91 <sup>52</sup>	0.00937 <sup>66</sup>	1.98 <sup>80</sup>	H
<i>Tamiasciurus hudsonicus</i>	60 <sup>e,o,10</sup>	215 <sup>35</sup>	0.00735 <sup>67</sup>	4.0 <sup>80</sup>	H
<i>Thunnus albacares</i>	80 <sup>e,s,26</sup>	45349.0 <sup>53, 54</sup>	0.00158 <sup>68*</sup>	6.24 <sup>77</sup>	H
<i>Tupaia glis</i>	90 <sup>b,o,27</sup>	142.0 <sup>55</sup>	0.00424 <sup>55</sup>	3.4 <sup>79</sup>	H

\* Indicates species with qWg estimated from swimming speeds extrapolated to zero (see Methods in main text). CFF = Critical flicker fusion (CFF), Mg = body mass (grams), qWg = Temperature corrected (25°C) mass specific resting metabolic rate (Wg<sup>-1</sup>), Light levels, H= High, L = Low. NA = No data available for species. Superscript indicates type of measurement, e = electroretinogram, b = behavioural experiments, o = optimum methodology, s = suboptimum methodology and numbers refer to data references; (1) Crevier & Meister (1998); (2) Adrian & Matthews (1926); (3) Fleishman et al. (1995); (4) Bornsheim & Tansley (1961); (5) Ault & House (1987); (6) Coile et al. (1989); (7) Hanyu & Ali (1963); (8) McComb et al. (2010); (9) Levenson et al. (2004); (10) Tansley et al. (1961); (11) Eckert et al. (2006); (12) Loop & Berkeley (1975); (13) Lisney et al. (2011); (14) Meneghini & Hamasaki (1967); (15) Brundrett (1974); (16) Shumake et al. (1968); (17) Ginsburg & Nilsson (1971); (18) Gruber (1969); (19) Carvalho et al. (2004); (20) Carvalho et al. (2002); (21) Bernholz & Matthews (1975); (22) Green & Siegel (1975); (23) Williams et al. (1985); (24) Woo et al. (2009); (25) Greenwood et al. (2004); (26) Southwood et al. (2008); (27) Callahan & Petry (1999); (28) Makarieva et al. (2008); (29) Rogowitz (1996); (30) Graber (1962); (31) Ganey et al. (1993); (32) Kendall et al. (1982); (33) Hughes et al. (1977); (34) Duermit (2007); (35) Arends & McNab (2001); (36) Jackson & Prange (1979); (37) Terres (1980); (38) Georges & Fossette (2006); (39) Winchester (1940); (40) Hurlburt (1996); (41) Holloway (1980); (42) Howland et al. (2004); (43) Schwartz & Kemnitz (1992); (44) Allyn (1947); (45) Ridolfi (2006); (46) Stewart & Lavigne (1984); (47) Hove & Moss (1997); (48) Hart (1971); (49) McKeever (1964); (50) Herrel et al. (2010); (51) Letourneur et al. (1998); (52) Sheppard (1968); (53) Collette & Nauen (1983); (54) Duarte-Neto & Lessa (2004); (55) Bradley & Hudson (2003); (56) Carlson (1999); (57) Lutz et al. (1989); (58) Paladino et al. (1996); (59) Eisenberg (1981); (60) Elgar & Harvey (1987); (61) Bruhn (1934); (62) Bushnell et al. (1989); (63) McNab (1986); (64) Hudson et al. (1972); (65) Lowe (2001); (66) Jones & Wang (1976); (67) Pauls (1981); (68) Dewar & Graham (1994); (69) Garamszegi et al. (2002); (70) Iwaniuk & Nelson (2002); (71)