# Contents

**Acknowledgments**  
ix

### Part I Background

1. Introduction  
   Page 3

2. The mammals  
   Page 10

3. The nature of scaling (Box 3.1)  
   Page 18

4. Towards a standardized body weight table  
   Page 41

5. A reader’s guide  
   Page 46

### Part II Empirical analyses

6. Body length, girth, and surface area  
   Page 61

7. Body size distribution in adult mammals  
   Page 68

8. Body composition  
   Page 72

9. Circulatory system (Box 9.1)  
   Page 91

10. Digestive system  
    Page 123

11. Integumentary system  
    Page 137

12. Musculoskeletal system (Box 12.1)  
    Page 142

13. Neuroendocrine system (Box 13.1)  
    Page 157

14. Reproductive system  
    Page 173
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Respiratory system</td>
<td>182</td>
</tr>
<tr>
<td>16</td>
<td>Urinary system (Box 16.1)</td>
<td>195</td>
</tr>
<tr>
<td>17</td>
<td>Function (Box 17.1)</td>
<td>204</td>
</tr>
<tr>
<td>18</td>
<td>Lethal limits</td>
<td>231</td>
</tr>
<tr>
<td>Part III</td>
<td>Survey of results</td>
<td>243</td>
</tr>
<tr>
<td>19</td>
<td>Structural summary</td>
<td>245</td>
</tr>
<tr>
<td>20</td>
<td>Functional summary</td>
<td>259</td>
</tr>
<tr>
<td>21</td>
<td>End-sample, mid-sample, and FDS</td>
<td>268</td>
</tr>
<tr>
<td>22</td>
<td>Human scaling</td>
<td>272</td>
</tr>
<tr>
<td>Part IV</td>
<td>Methodology</td>
<td>279</td>
</tr>
<tr>
<td>23</td>
<td>Scaling statistics</td>
<td>281</td>
</tr>
<tr>
<td>24</td>
<td>Scaling sums</td>
<td>306</td>
</tr>
<tr>
<td>Part V</td>
<td>A broader view</td>
<td>335</td>
</tr>
<tr>
<td>25</td>
<td>A sense of scale</td>
<td>337</td>
</tr>
</tbody>
</table>

Appendix A  Recommended reading  358  
Appendix B  Data screening guidelines  361  
Appendix C  Summary of the findings of Samuel Brody  363  
References for quotations  365  
Index  370