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Fig. 1

A diagram showing a feather with percentage markings at various sections:

- Rachis: 0%
- 25%
- 50%
- 75%

Sections of the feather with percentages:

- 9: 99%
- 8: 87.5%
- 7: 75%
- 6: 62.5%
- 5: 50%
- 4: 37.5%
- 3: 25%
- 2: 12.5%
- 1: 0%

Additional diagrams illustrating different perspectives:

- B: A scale for measurement.
- D: A cross-sectional view labeled with transverse, lateral, and dorso-ventral orientations.
Fig. 2

Fig. 3
Fig. 4

F. peregrinus  C. livia  F. tinnunculus  A. nisus

Fig. 4
Fig. 6

F. peregrinus  C. livia  F. tinnunculus  A. nisus

Fig.6
Fig. 7
Fig. 8
Fig. 11

Specific bending stiffness (N/m/m)

Body mass (g)

Primary 10  Tail feather  Alula

transverse

lateral

dorso-ventral

Fig. 11
Fig. 12

Fig. 13
Table 1: Data of the evaluated feathers

In each species we investigated two males and two females. As in *F.peregrinus* sexual dimorphic differences in the weight were considerable therefore we plotted both sexes separately. For the wing we evaluated feathers of both body sides and for the tail we evaluated the two central feathers. If possible, mean and S.D. are given.

<table>
<thead>
<tr>
<th></th>
<th><em>F.peregrinus</em></th>
<th></th>
<th><em>C.livia</em></th>
<th></th>
<th><em>F.tinnunculus</em></th>
<th></th>
<th><em>A. nisus</em></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>males</td>
<td>females</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Mass (g) mean values (±S.D.)</td>
<td>567.5 (±24.7)</td>
<td>794 (±53.5)</td>
<td>482.5 (±4.61)</td>
<td>191.8 (±17.7)</td>
<td>200.2 (±4.8)</td>
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<tr>
<td>Length of the rachis (cm)</td>
<td></td>
<td></td>
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<tr>
<td>Primary 10</td>
<td>20.7 (±0.28)</td>
<td>23.05 (±0.07)</td>
<td>14.65 (±0.12)</td>
<td>17.95 (±0.96)</td>
<td>8.94 (±0.13)</td>
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<tr>
<td>Tail feather</td>
<td>14.5 (±0.05)</td>
<td>16.6 (±0.08)</td>
<td>10.9 (±0.06)</td>
<td>16.06 (±0.35)</td>
<td>15.9 (±0.11)</td>
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<tr>
<td>Alula</td>
<td>7.75 (±0.06)</td>
<td>8.23 (±0.1)</td>
<td>5.03 (±0.06)</td>
<td>6.92 (±0.07)</td>
<td>7.45 (±0.33)</td>
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</tr>
<tr>
<td>Length * body mass⁻¹ (mm g⁻¹)</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Primary 10</td>
<td>0.36</td>
<td>0.29</td>
<td>0.30</td>
<td>0.94</td>
<td>0.45</td>
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<tr>
<td>Tail feather</td>
<td>0.26</td>
<td>0.23</td>
<td>0.23</td>
<td>0.84</td>
<td>0.79</td>
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<tr>
<td>Alula</td>
<td>0.14</td>
<td>0.10</td>
<td>0.10</td>
<td>0.36</td>
<td>0.37</td>
<td></td>
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</tbody>
</table>