WING BEAT AND FLIGHT PATTERNS USEFUL IN AVIAN ID

A DVOC Ornithological Moment
presentation by

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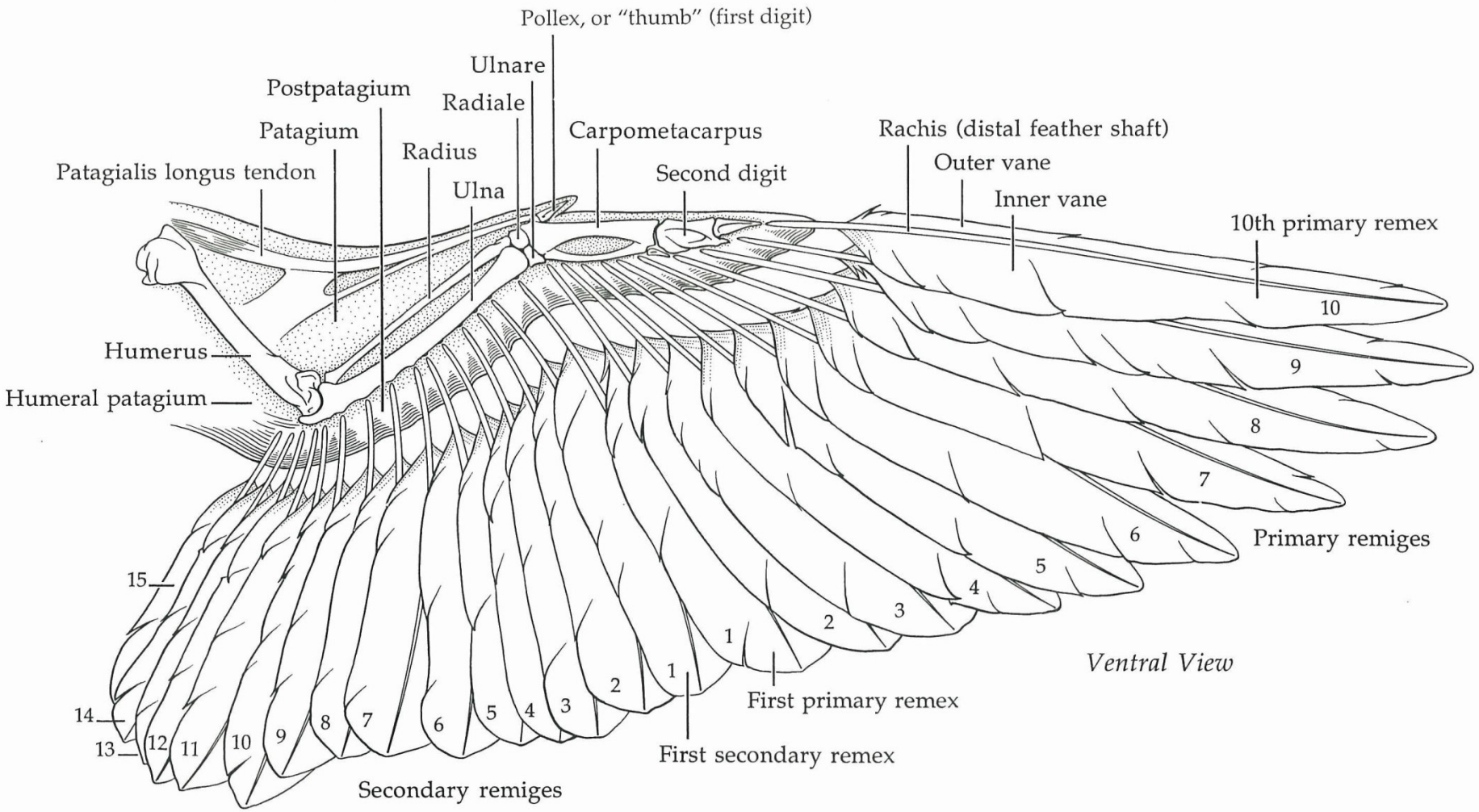
WING CONTROL

- Inner wing vs. outer wing

Internal Structures of the Wing
Rock Dove (*Columba livia*)



The bones of the avian wing have been extensively fused and reduced in number. This results in a strong, light inner framework capable of supporting the major flight feathers. The wing skeleton must efficiently transfer the power of the flight muscles to drive active flight. Note how short and thick the humerus is in the modern pigeon wing. The humerus must bear the main force of the pectoralis major, the massive breast muscle that powers the downstroke phase of active flight. If the humerus were less sturdy it could not bear up against the huge lever forces generated by flight.

References: Cramp and Simmons 1977; Palmer 1976; Van Tyne and Berger 1976.

CONSIDERATIONS FOR ID

- Line of Flight – straight vs. undulating
- Wing Beat Variations – steady vs. interrupted

Paired ID Considerations

- American vs. Fish Crow
- Kestrel vs. Merlin
- Cooper's vs. Sharpie

More Paired ID Considerations

- **Starlings & Native Blackbirds**
  - **Straight Line of Flight = starlings, meadowlarks, grackles, Brewer's & Rusty's.**
  - **Undulating or Irregular Flight = Red-wings & Cowbirds**

Conclusion

- **practice, practice, practice**

- Reference: Proctor, Noble S. & Lynch, Patrick J. (1993) *Manual of Ornithology. Avian Structure & Function.* Yale University Press, New Haven and London.