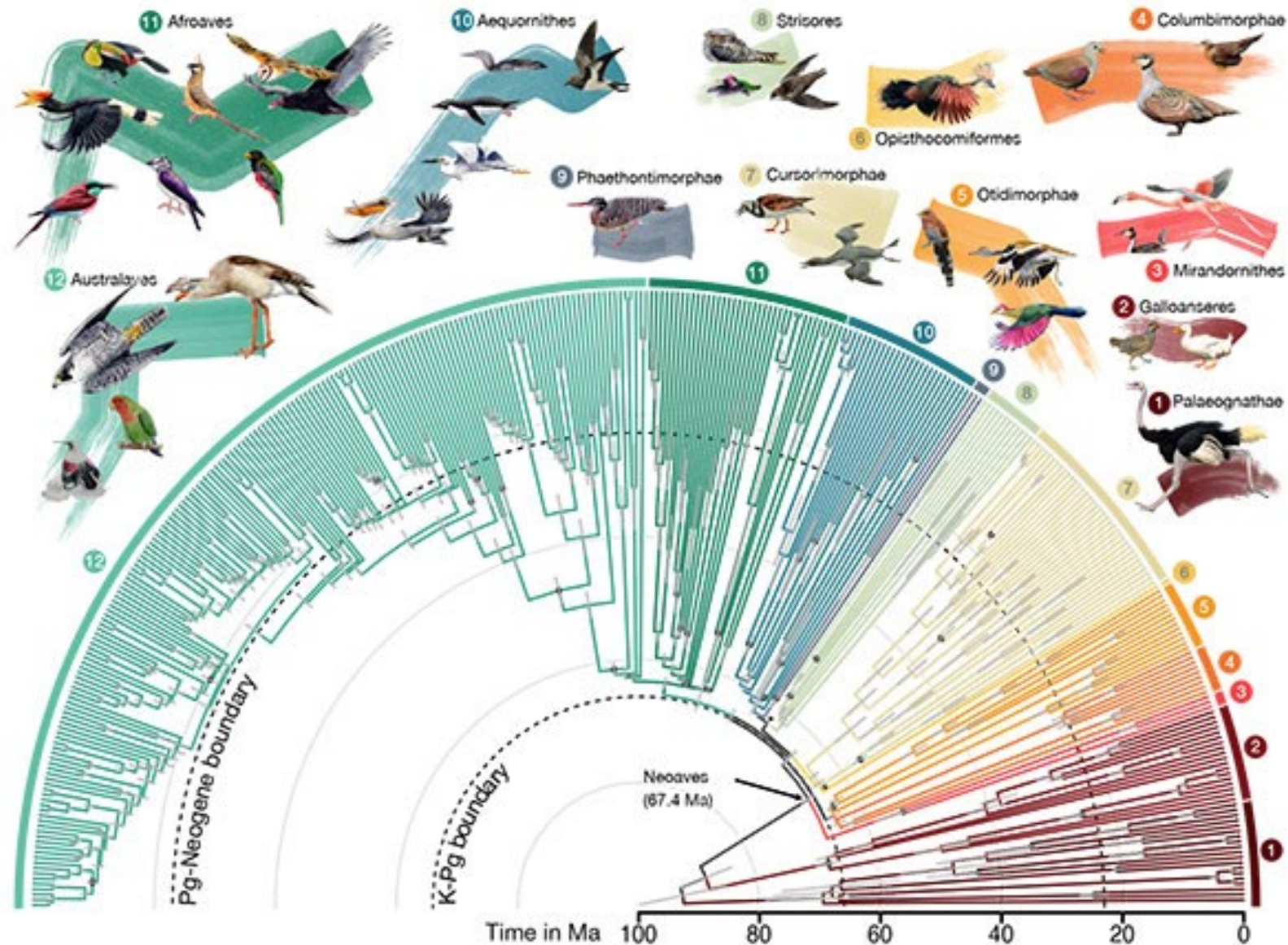


Evolution of Taxonomy

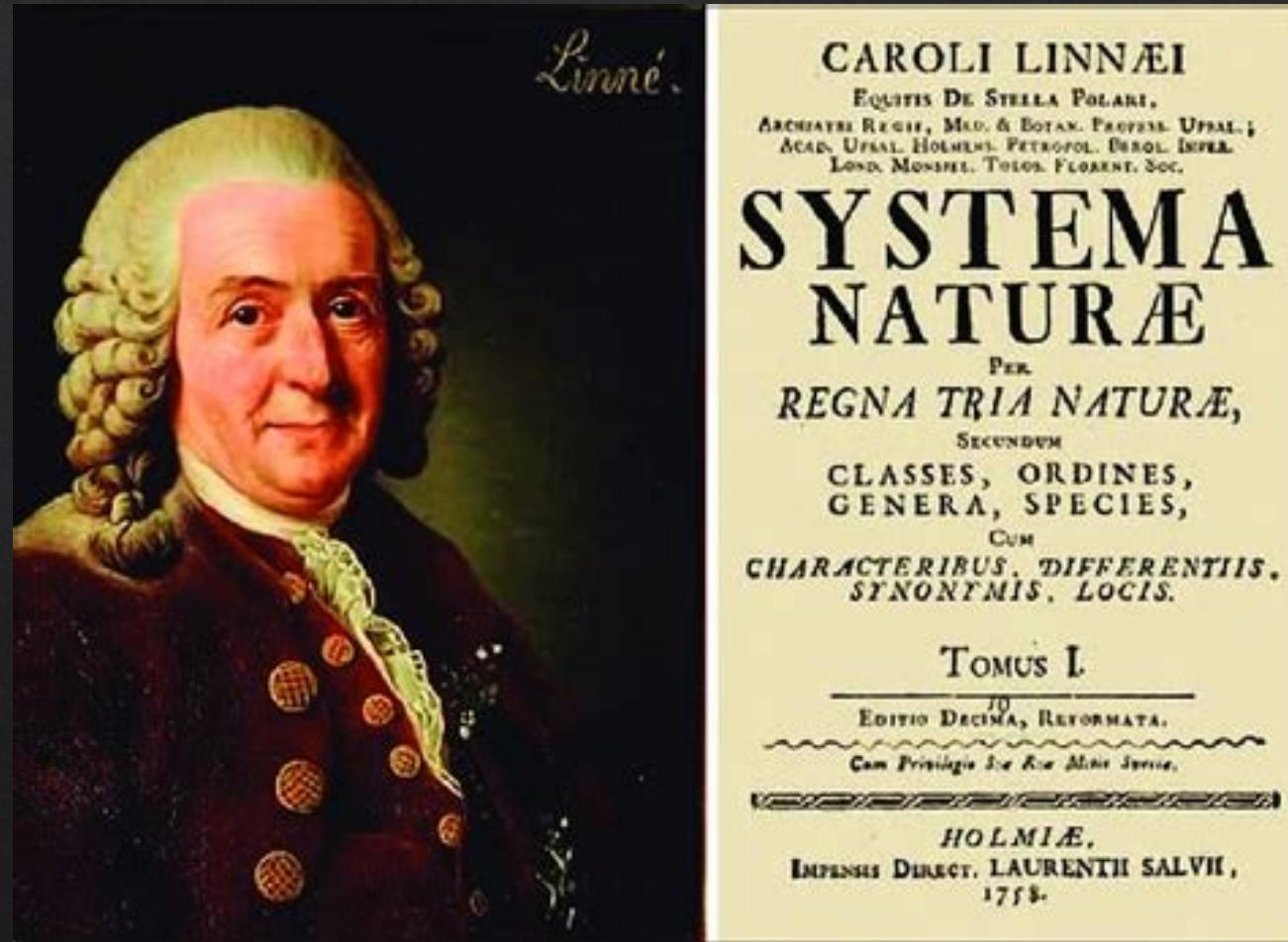


Evolution of Taxonomy

- Taxonomy – orderly classification of plants and animals according to their natural relationships.
- Taxonomic checklist – a linear representation of a taxonomy.

Evolution of Taxonomy

- Linnaeus's *Systema Naturae* (1758) – first modern taxonomy of animals, recognized 554 species of birds.



Evolution of Taxonomy

- Mid-1800s – Early 1900s – the “golden era” of bird discovery.
- Most birds were classified by museum-based ornithologists using morphological traits.
- Development of evolutionary biology and genetics culminated in the “biological species concept” (Ernst Mayr, 1942).
- Mayr in 1946 estimated the number of bird species at 8,616 and stated that “the period of new bird discoveries is practically at its end.” Roughly 400 species discovered since then.
- Among animal classes, taxonomic understanding of birds is unparalleled.

Evolution of Taxonomy

- “Peters’ Checklist” – James L. Peters, 16 volumes mostly published 1931-1952.
- The only globally comprehensive checklist, it provided decades of taxonomic stability.

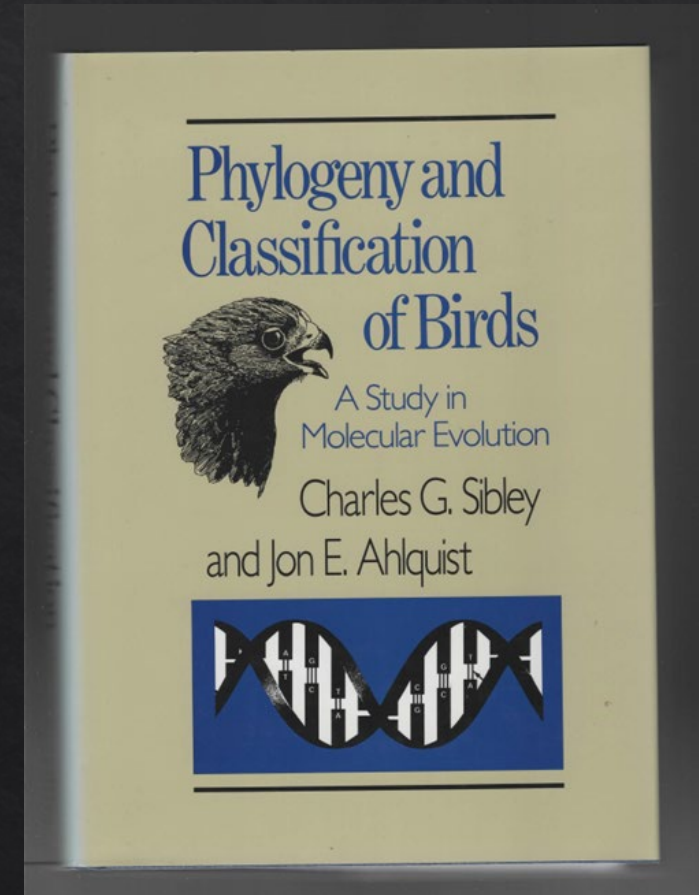


Evolution of Taxonomy

- 1970s – growth of field ornithology and recreational birding.
- 1980s – 1990s - rise of DNA technology to study evolutionary relationships.
- Use of bioacoustics and digital recording of bird sounds sheds light on many previously cryptic species.

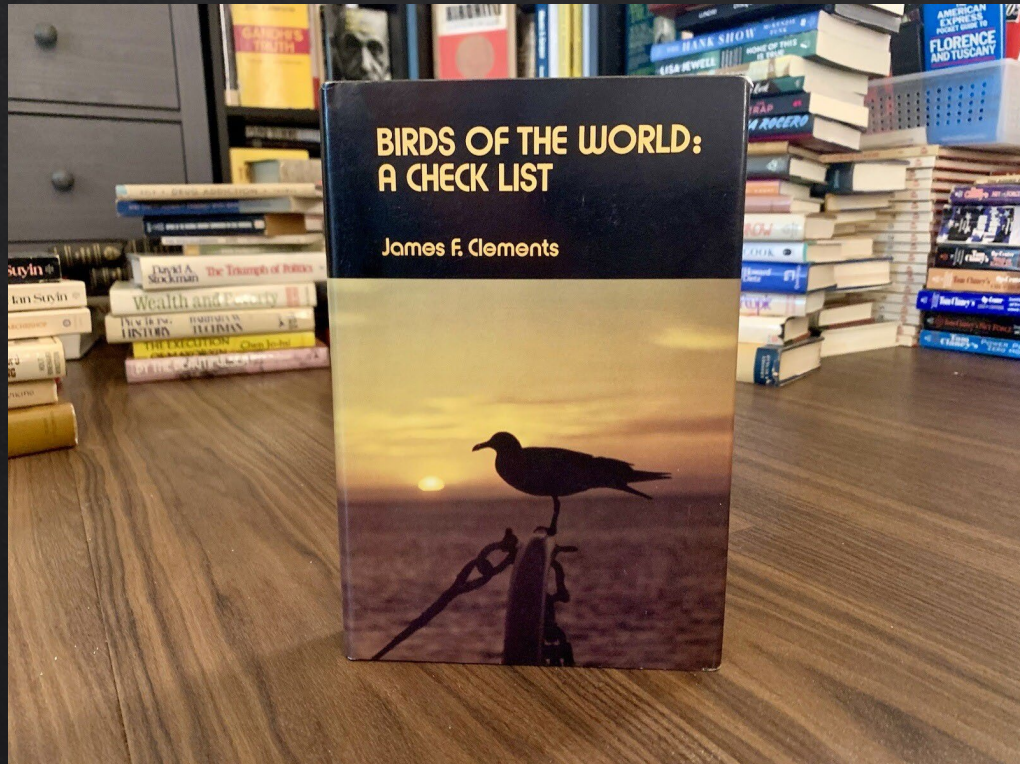
Evolution of Taxonomy

- Sibley & Ahlquist “Phylogeny and Classification of Birds” (1990)
- Modern phylogenetic approach led to massive reconsideration of former morphological classification.
- Has since been supplanted by modern DNA techniques.



Evolution of Taxonomy

- Taxonomic consensus breaks down and several competing taxonomies emerge, including regional checklists.
- James F. Clements – “Birds of the World: A Check List” (1974)



Evolution of Taxonomy

- Clements checklist was adopted by ABA, went through 6 editions until his death in 2005.
- Clements' widow asked Cornell to take over revisions, became the "Clements/eBird" checklist.
- Based on American Ornithological Society checklist committees.

Evolution of Taxonomy

Other global checklists:

- Howard & Moore *Complete Checklist of Birds of the World* (1980) – included subspecies. Updated through 2013.
- International Ornithological Congress (IOC) *World Bird List* – started in 1990s, attempted to further standardize taxonomy and nomenclature (including English names). Became the standard taxonomy used in Europe and elsewhere globally.
- Handbook of Birds of the World – *International Illustrated Checklist of the Birds of the World* (2013)

Evolution of Taxonomy

Need for a standard “harmonized” bird checklist:

- Differences among the major lists (names, species limits, sequence) created confusion for record-keeping, citizen science, and international comparisons.
- Calls grew within ornithology for a harmonized, consensus global checklist to reduce ambiguity and improve interoperability.

Evolution of Taxonomy

How AviList came together:

- Initial discussions began in 2016 among leaders from the existing checklists and organizations, followed by formal meetings in late 2019 to set governance and procedures.
- Key participants included representatives from IOC, eBird/Clements, Avibase, BirdLife, and several individual taxonomic specialists who agreed to collaborate.



Evolution of Taxonomy

- The group worked for about four years to produce a consensus taxonomy, agreeing on procedures, committees, and mechanisms for ongoing updates and governance.
- Processes, committees, and update mechanisms were agreed to provide ongoing maintenance and transparency
- The result is a unified global checklist intended to be the authoritative, regularly updated reference for birds worldwide.

Evolution of Taxonomy

- For birders a single consensus checklist improves comparability of life lists, supports consistent reporting across platforms, and clarifies conservation assessments.
- AviList offers a maintained, documented taxonomy with clear governance and annual/versioned updates for community use.
- Other checklists to be phased out in 2026.

v2025 includes:

11,131 species

252 families

AviList.org

AviList

The Global Avian Checklist